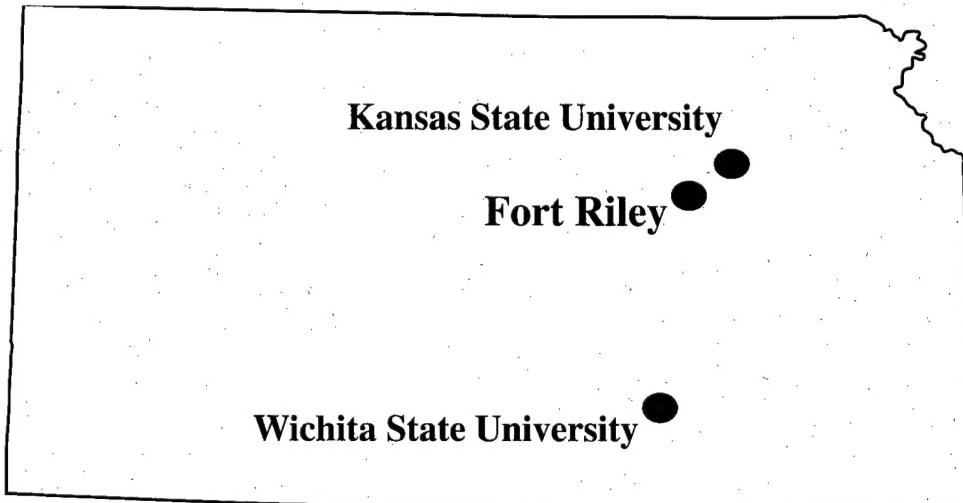


ARCHAEOLOGICAL CURATION-NEEDS ASSESSMENTS

Technical Report No. 4



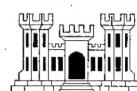
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Mandatory Center of Expertise for the Curation and Management of Archaeological Collections



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**AN ARCHAEOLOGICAL CURATION-NEEDS ASSESSMENT
FOR
FORT RILEY, KANSAS**

By

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Prepared for
and
Submitted in fulfillment under agreement with
Fort Riley, Kansas

**U.S. Army Corps of Engineers
St. Louis District
Mandatory Center of Expertise for the
Curation and Management of Archaeological Collections
Archaeological Curation-Needs Assessments
Technical Report No. 4**

1996

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EXECUTIVE SUMMARY

PROBLEM

Federal archaeological collections are a significant and nonrenewable national cultural resource; however, curation of these materials has been largely substandard or ignored for over thirty years. The result has been a steady deterioration of these resources, which include many priceless objects of long-vanished cultures. At best, most of these precious collections of our nation's heritage were stored and abandoned in attics, basements, and closets of countless storage facilities across the United States. Many even were illegally transported to Europe where they are still located today. The improper care and subsequent deterioration of many of these collections not only violate the laws under which they were recovered but also prevent educational and scientific use. Valuable portions of the North American legacy have been lost, and the considerable financial investment by the American public in archaeological recovery has been squandered.

BACKGROUND

The Department of the Army is responsible for the management of cultural resources on Fort Riley property and for the archaeological and historical materials removed from these lands. As mandated by federal law, agencies are required to ensure that all recovered archaeological materials and the associated records are adequately curated. Unfortunately, funding shortfalls, lack of a consistent national policy, and the magnitude of the problem have prevented compliance.

Department of the Army collections are public property, the result of many years of archaeological research and the expenditure of millions of federal dollars. A federally sponsored mitigation program usually provides for the recovery of materials from archaeological sites, the analysis of recovered items, the publication and circulation of a final report, and the placement of collections in storage facilities for preservation, display, or future study. In the past, federal agencies gave little attention to the maintenance of collections once salvage programs were completed. Through the years, most collections have been stored free of charge by universities and museums. Inadequate funding and failing facilities now seriously hinder these institutions' ability to adequately care for collections.

At the request of Fort Riley, the U.S. Army Corps of Engineers Mandatory Center of Expertise for the Curation and Management of

Archaeological Collections (MCX) was asked to identify and assess known collections located at Fort Riley, Kansas State University, and Wichita State University. These inspections produced evidence documenting widespread deterioration and neglect of many of Fort Riley's archaeological collections.

During a subsequent project sponsored by the U.S. Army Environmental Center (AEC), MCX personnel performed a site file search at the Kansas State Historical Society in Topeka and identified additional collections. Data gathered from this project are in Appendixes II and III.

FINDINGS

Status of Facilities

1. Repository Adequacy: Fort Riley collections are presently curated in three Kansas facilities encompassing six separate repositories. These three facilities and their corresponding repositories include the following.

- a. United States Cavalry Museum, Fort Riley
 - (1). Main Museum (Building 30/205)
 - (2). Museum Annex (Building 203)
- b. Kansas State University, Manhattan
 - (1). Willard Hall, Room 20
 - (2). Burt Hall, Room 301A
 - (3). Burt Hall, Rooms 10 and 11
- c. Wichita State University, Wichita, Henrian Hall, Room 104

Among these six repositories, only the Cavalry Museum and its Museum Annex meet the minimum standards for curation that are mandated by 36 CFR Part 79 (Curation of Federally-Owned and Administered Archaeological Collections), a (1991) regulation that establishes professional standards for the management and care of all federal collections.

2. Maintenance of Repositories: Custodial staff provide regular building maintenance at the Cavalry Museum and the Kansas State University repositories. There is no schedule for regular maintenance at the Wichita State University repository.

3. Environmental Controls: Regulated and consistent temperature and humidity levels are essential for the long-term preservation of

archaeological collections. Among the six repositories, only the Cavalry Museum and its Museum Annex are equipped with automated environmental monitoring and control systems. In these repositories, environmental monitoring records indicated that temperature and humidity levels have been continuously maintained within the standards set by the American Association of Museums. Kansas State University and Wichita State University repositories have no automated environmental monitoring and control systems. Temperature fluctuations and high humidity at these locations have resulted in the deterioration of collection materials.

4. Security: Only two repositories, the Cavalry Museum and its Museum Annex, are equipped with intrusion detection systems. At these locations, dead-bolt door locks, standard window locks, and steel bars on ground floor windows provide additional security. A walk-in safe/vault provides secure storage for valuable items in the Museum Annex. Among the repositories located at Kansas State University and Wichita State University, security is provided by dead-bolt door locks, standard window locks, steel bars on ground floor windows, and regular Campus security patrols in the surrounding vicinity. No intrusion detection system is present at either location.

5. Fire Detection/Suppression: Two repositories, the Cavalry Museum and its Museum Annex, are equipped with sprinkler systems and fire extinguishers that have up-to-date inspection tags. The Cavalry Museum main building is also equipped with smoke detectors, but there are no smoke detectors in the Museum Annex. Among the other repositories--Willard Hall, Room 20, Kansas State University and Henrian Hall, Room 104, Wichita State University--each has a ceiling sprinkler system but no smoke detectors or fire extinguishers. The rooms in Burt Hall--Room 301A, and Rooms 10 and 11--at Kansas State University have no internal fire detection/suppression system.

6. Pest Management: An effective pest control program is essential for the long-term survival of many archaeological collections and associated records. Each of the six repositories has an established pest control program, with examination and treatment described by curators as "regular" at the Cavalry Museum and Kansas State University, and as "periodic" by the curator at Wichita State University. Insect pests and evidence of insect damage were observed among collection materials at only one repository: Burt Hall, Room 301A, Kansas State University.

Status of Artifacts

MCX personnel assessed approximately 216 ft³ of artifacts. Of this total, most (215 ft³) of this material was recovered from the Hospital Latrine Project, 14HBS27. The Cavalry Museum at Fort Riley currently has a display case with approximately 1 ft³ of these artifacts, and Kansas State University is curating approximately 214 ft³ of this collection. Wichita State University is curating one cubic foot of prehistoric and historic artifacts recovered from four sites on Fort Riley.

Much of the material housed at Kansas State University and Wichita State University repositories is stored in primary containers that are composed of acidic cardboard and that have only rudimentary exterior labeling, inconsistent exterior labeling, or in some cases, no exterior labeling. These packaging and labeling conditions are in violation of 36 CFR Part 79.

Most of the secondary containers used by Kansas State University and Wichita State University repositories are also composed of acidic paper and cardboard, and as such, are an unacceptable museum storage media. This usage of nonarchival secondary containers has contributed to the deterioration of these collections and is also in violation of 36 CFR Part 79.

Status of Human Skeletal Remains

At the time of the assessment, no Native American human skeletal remains were identified in the Fort Riley collections; however, there are skeletal remains from one Euroamerican human fetus that was recovered from the Hospital Latrine Project. This material is being curated in the Museum Annex at Fort Riley. No resources are required to comply with NAGPRA.

Status of Documentation

Documentation for the Fort Riley Hospital Latrine Project, totaling approximately 3.5 linear feet, is housed in Kansas State University and Wichita State University repositories. No archaeological records associated with the project are housed at the Cavalry Museum or the Museum Annex. The associated documentation includes a primary catalog of Hospital Latrine artifacts, background records, photographs, and computer records (Kansas State University) and excava-

tion, analysis, and report records (Wichita State University). No finding aids are present at either location. None of the documentation has been preserved on archival quality paper, and no security copies have been made for remote storage. Much of the documentation is beginning to show wear, and there is discoloration of pages due to the use of acidic paper. Although the current condition of the documentation at both locations is rated as fair to good, under current storage and management practices continued deterioration will occur.

Status of Repository Management Controls

All facilities have accession records for the collections within their responsibility. All facilities have written records indicating the location of collections within the repositories. Only the Cavalry Museum has collection information cross-indexed. No facilities utilize a computerized database for collections management, and no collection guides have been published.

Among the repositories for Fort Riley's archaeological collections, only the Cavalry Museum has written policies and procedures encompassing minimum standards for acceptance, curation, records-management, field-curation, loan procedures, deaccessioning, and inventorying collections.

CORRECTIVE ACTIONS

A number of corrective measures are necessary to bring the Fort Riley collections, and those facilities housing them, into compliance with 36 CFR Part 79. The MCX recommends the following:

1. Designate a single repository as the long-term curation facility for Fort Riley archaeological collections. Appropriate funds to curate and conserve the materials according to federal regulations and guidelines.
2. Return collections at Wichita State University to Fort Riley so that they can be curated and conserved according to federal regulations and guidelines.
3. Curate artifacts in a stable environment.
4. Rehabilitate Fort Riley collections by reboxing and rebagging in archival quality containers.

5. Arrange, describe, and preserve all associated documentation and reports according to federal guidelines. Most important, copy all associated archaeological documentation onto acid-free paper or into a microformat, and store copies in a separate, secure location.

The corrective measures, if implemented, would allow Fort Riley to meet the minimum federal requirements for the adequate long-term curation of archaeological collections. By adopting this approach, Fort Riley has the opportunity to implement a curation program that will serve its needs well into the next century.

CONCLUSIONS

Attainment of each recommendation may not be possible immediately. However, because the collections are rapidly deteriorating in the current storage environments and there is no long-term, consistent management plan for the proper curation of archaeological collections and associated records, some action is necessary. These federal collections contain raw archaeological information, and if not properly cared for soon, they will lose their educational and research value and potential. Any progress will insure that these collections will be more adequately preserved than they are now and that they will be useful to future generations.

ACKNOWLEDGMENTS

The following individuals are thanked for their contributions to this report. Without their assistance this work would not have been completed.

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Terry Van Meter, United States Cavalry Museum

William McKale, United States Cavalry Museum

U. S. ARMY ENGINEER DISTRICT, KANSAS CITY

John Dendy

WICHITA STATE UNIVERSITY, WICHITA, KANSAS

Louise Burton

Arthur Rohn

INTRODUCTION

With the westward movement of settlers along the Oregon, Santa Fe, and Denver-Overland Trails, a cavalry unit, the 1st Dragoon, was sent from Fort Leavenworth in 1833 to reconnoiter the Plains and to protect the emigrant trains. The 1st Dragoon recommended the establishment of a base at the location of present-day Fort Riley so that troops could be billeted closer to possible conflict areas. The fort was first called Camp Center but was renamed for Major General Bennett Riley, the leader of the first escort on the Santa Fe Trail in 1829. Construction of the fort began in 1855 under the direction of Major E. A. Ogden.

Fort Riley was the home of the Seventh Cavalry and Lt. Colonel George A. Custer between 1866 and 1876. The Seventh Cavalry was defeated at the Battle of the Little Bighorn in June 1876. Reestablished in the late 1880s, the Seventh Cavalry marched from Fort Riley to Wounded Knee Creek in Dakota Territory in December 1890 and participated in the so-called Wounded Knee Massacre.

Fort Riley became the headquarters for the Cavalry, and the Cavalry and Light Artillery schools were established there in 1887. Camp Funston, located within the confines of the fort, was a major World War II training facility for army infantry units headed for France.

Fort Riley is now the home of the First Infantry Division and a number of armored cavalry units. The base contains extensive historic components and a poorly understood prehistoric component. The United States Cavalry Museum, the Cavalry Memorial Research Library, and the First Infantry Division Museum are located on Fort Riley.

Archaeological collections under the care of Fort Riley are housed in a number of locations in Kansas. The United States Cavalry Museum displays some of the fort's archaeological collections from the Hospital Latrine Project. Most of the archaeological collections from the Hospital Latrine Site—14HBS27—are located at Kansas State University in Manhattan. A small portion of the Hospital Latrine Site artifacts is on loan from the Cavalry Museum to Fort Larned National Historic Site in Larned, Kansas. Smaller prehistoric and historic collections are curated at Wichita State University. The inspection team examined collections from all repositories except Fort Larned.

Archaeological compliance activities are administered for the installation by the U. S. Army Engineer District, Kansas City archaeologist, John Dendy. Historic building compliance is the responsibility of Vickie Hamilton, the fort's architectural historian. These positions are newly funded, and it will be some time before the installation is in full compliance with federal archaeological law and regulations.

In the past, the responsibility for Fort Riley's archaeological collections rested with contractors. The United States Cavalry Museum staff, with the assistance of the Kansas City District, will be responsible for the collections in the future.

FORT RILEY, KANSAS, INSTALLATION SUMMARY

(1) Volume of Artifact Collections: 216 ft³

On Base: 1 ft³

Off Base: 215 ft³

Compliance Status: All artifacts will require at least partial rehabilitation to comply with existing federal curation regulations.

(2) Linear Feet of Records: 3.5 linear feet

On Base: None

Off Base: 3.5 linear feet

Compliance Status: All associated documentation will require complete rehabilitation to comply with existing federal guidelines and standards for modern archival preservation. The documentation must be duplicated on acid-free paper and stored at a separate, secure location.

(3) Human Skeletal Remains: At the time of the assessment, no Native American human skeletal remains were identified in the Fort Riley collections.

(4) Status of Curation Funding: Annual expenses for curation are covered by the limited funding from the base commander. No specific funding for curation at Kansas State University exists. Any funds spent on the curation of these materials must be derived from the overall budget of the Kansas State University Anthropology Department. Likewise, no specific funding for curation has been budgeted at Wichita State University. Any funds spent on the curation of these materials are derived from the overall budget of the Wichita State University Anthropology Department.

(5) Status of Installation Repository: The United States Cavalry Museum is the designated base repository for archaeological collections. It meets most of the federal requirements for such facilities. Collections are cataloged and accessible. Most of the Fort Riley archaeological collections, however, are not curated at the United States Cavalry Museum but at repositories that fall far short of compliance with federal requirements for such facilities. Archaeological curation is a major component of historic properties management, but the Fort Riley collections are not receiving financial and staff commitments that are required by federal law.

FORT RILEY, KANSAS**REPOSITORY SUMMARY****(1) Volume of Artifact Collections:** 1 ft³

Compliance Status: Collection requires partial rehabilitation to comply with existing federal guidelines and standards for curation.

(2) Linear Feet of Records: None

Compliance Status: Not applicable

(3) Human Skeletal Remains: Skeletal remains from one Euroamerican fetus are being curated in the Museum Annex (Building 203).**(4) Status of Curation Funding:** Funding for curation is limited and inadequate.

INTRODUCTION

DATE OF VISIT: 19–27 July 1993

PERSONS CONTACTED: John Dendy, Vickie Hamilton, Terry Van Meter, and William McKale

Collections at Fort Riley are stored in the United States Cavalry Museum. The Museum consists of two separate buildings—the main museum (Building 30/205—Repository 1) and an adjacent annex (Building 203—Repository 2). Approximately one cubic foot (1 ft³) of archaeological materials from the Hospital Latrine Collection—Site 14HBS27—is curated at the Museum. Glass bottles, ceramics, and metal artifacts from the collection are on display.

REPOSITORY

Repository 1

The United States Cavalry Museum (Figure 1)—Repository 1—displays historic artifacts from the Hospital Latrine Collection—Site 14HBS27. Most of the remaining display space is devoted to uniforms, weapons, and accoutrements from all periods of the U.S. Cavalry and Dragoons.

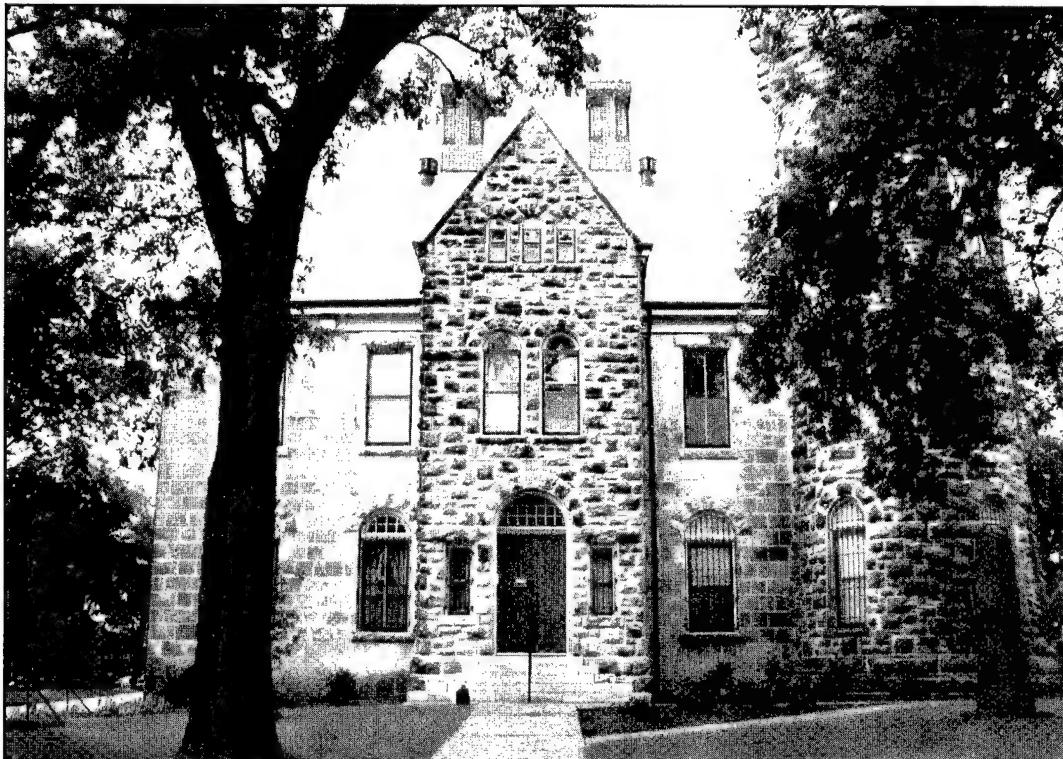


Figure 1. Front entrance to the Cavalry Museum at Fort Riley, Kansas.

Repository 2

Repository 2 (Figure 2)—Building 203—is adjacent to the Cavalry Museum and contains documents on the materials displayed in the Museum. The Museum also will curate a collection from Fort Riley that was in the possession of the U.S. Army Corps of Engineers Construction Engineering Research Laboratory (CERL).

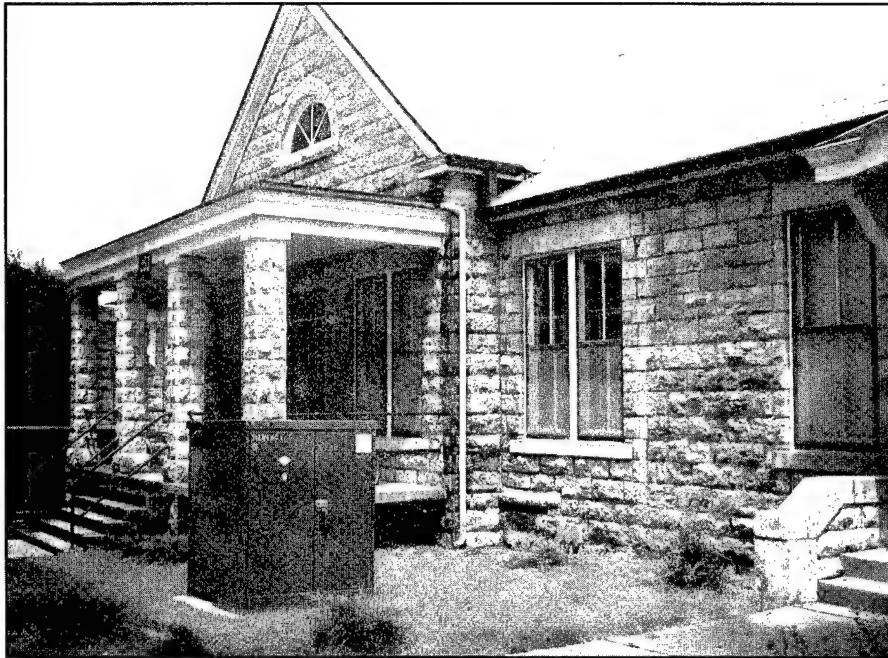


Figure 2. Exterior view of Repository 2.

Structural Adequacy

Repository 1—The Cavalry Museum

The Cavalry Museum is a structurally sound building that is constructed of local limestone blocks with an asphalt shingle roof. It was built in 1855 and served as the fort hospital. The building was remodeled in 1872 to serve as the headquarters of the commanding officer. Remodeling occurred again in 1886 and changed the function to an administrative building. The interior has been further modified as a museum with a display area, offices, and a gift shop.

On the ground floor and second floor display areas, interior walls are constructed of wood framing and plasterboard, and the ceiling is suspended acoustical tiles. Ceilings and walls in the rest of the building are original plaster. Original wood floors have been covered with linoleum. Plumbing and electrical systems have been modified through the years. The electrical system has been refurbished within the last ten years.

Numerous windows (Figure 3) face in all directions on the three floors. On the first floor, 10 windows face north (four are blocked from the inside), 14 face west (all are blocked from the inside), six face south (five are blocked from the inside), and nine face east (four are blocked from the inside). All windows on this floor are covered with steel bars. On the second floor, 10 windows face north



Figure 3. View of Cavalry Museum windows.

(two are blocked from the inside), 12 face west (11 are blocked from the inside), four face south (one is blocked from the inside), and five face east (four are blocked from the inside). On the third floor, six windows face north, none face west, and two face south.

The massive main doors of the Museum face north and are made of oak. Six additional wood doors provide access to the outside. Two face west, and both are blocked from the inside. One faces south and is blocked from the inside. Three face east, with two blocked from the inside. Numerous interior doors are constructed of solid wood. A prominent tower is located on the front of the Cavalry Museum.

The ground floor of the Museum is occupied by a gift shop (10% of the available space) and display space (90%). The second floor is occupied by display space (70%) and museum administrative offices (30%).

Repository 2—The Museum Annex

The Museum Annex is a one-story building constructed between 1899 and 1910 of cut limestone blocks with a shingle roof. It is structurally sound. Remodeling has occurred frequently; the most recent remodeling occurred in the 1950s. Interior walls are plasterboard, the ceiling is suspended acoustical tiles, and the original wood floor is covered with linoleum.

Three windows face north, and all of them are blocked from the inside. Eleven face west (seven are blocked from the inside), two face south (both are blocked from the inside), and 11 face east (three are blocked from the inside). Two doors face north, and both are blocked from the inside. Three face west (none are blocked). Two face south (neither is blocked), one of which serves as the main entrance to the building (Figure 4) and is located at the north end of a long porch.

Plumbing was added in the 1930s and has been repaired and maintained as needed. An electrical system was added in the 1950s. Some circuits were upgraded in 1989. Interior and exterior areas of the building are clean. Repository 2 is filled to approximately 60% capacity.

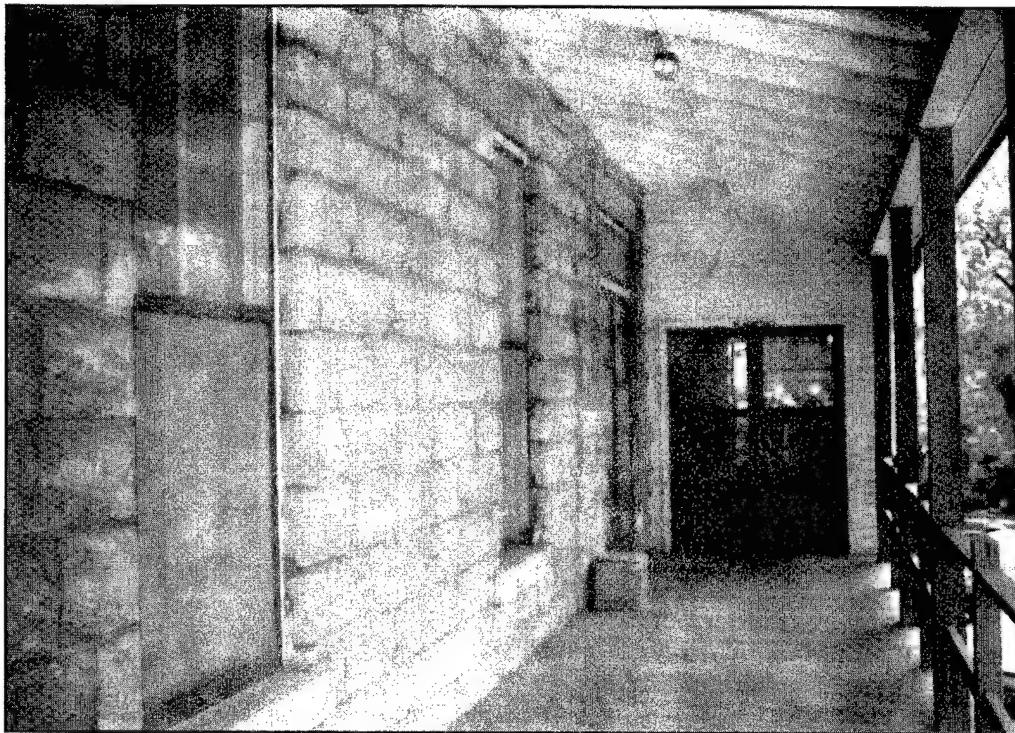


Figure 4.
Entrance to
Repository 2.

Environment

Repository 1

Repository 1 is equipped with a heating, ventilating, and air conditioning (HVAC) system. Targeted humidity and temperature levels are within the standards set by the American Association of Museums. Lighting, which is provided by recessed fluorescent fixtures, is adequate. All lighting in the display area has ultraviolet (UV) filters. No windows are present in the display area. Custodial staff provide regular building maintenance.

Repository 2

Repository 2 has central heating and cooling and is monitored regularly. Humidity and temperature levels are kept within the standards set by the American Association of Museums and are monitored with a recording hygrometer (Figure 5). Recessed fluorescent lights with UV filters provide illumination.

Pest Management

Repository 1

A regular pest management program has been implemented. No pest infestation was noted during the assessment.

Repository 2

A regular pest management program is in place. No evidence of infestation was noted during the assessment.

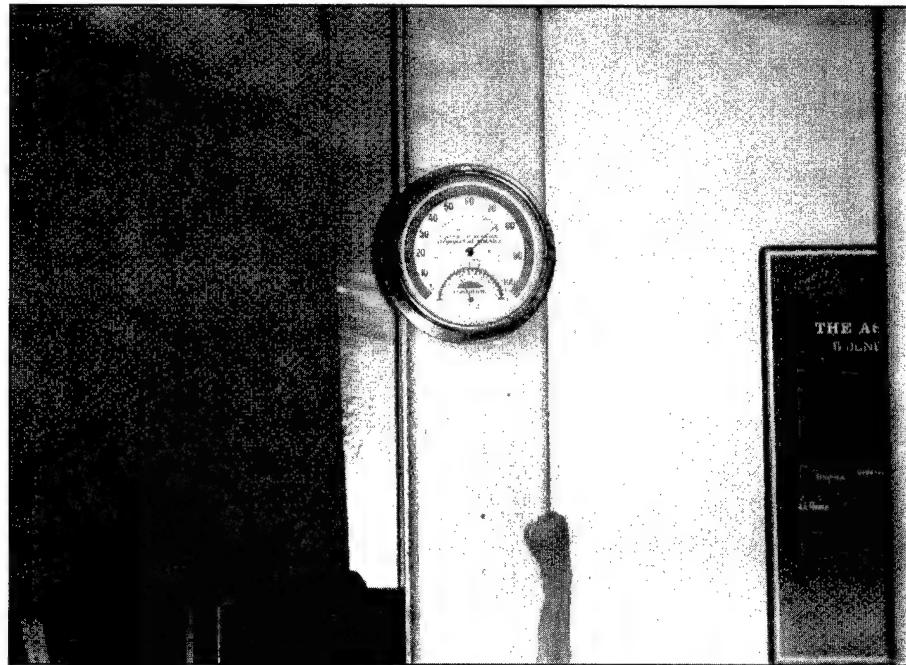


Figure 5.
Environmental
monitoring device in
Repository 2.

Security

Repository 1

Repository 1 is equipped with a security system that is monitored by base security a few blocks away. There are dead-bolt locks on all exterior doors. Access to the interior of the display cases is controlled by Terry Van Meter, the director of the United States Cavalry Museum. There is public access to the display areas. Windows are secured with standard window locks, and all windows accessible from the ground floor are barred. Base security regularly patrol the building.

Repository 2

Repository 2 is equipped with a security system that is monitored by base security a few blocks away. There are dead-bolt locks on the doors. Access to the building and storage areas is controlled by Terry Van Meter and William McKale, a museum specialist. The rear door to the building has a dead-bolt lock and a steel security bar. Windows are securely locked. A walk-in safe/vault (Figure 6) holds the valuable artifacts. Base security regularly patrol the building.

Fire Detection/Suppression Systems

Repository 1

Repository 1 is equipped with wet-pipe sprinklers, smoke detectors, and fire extinguishers with up-to-date inspection tags.

Repository 2

Repository 2 has a wet-pipe sprinkler system (Figure 7) in the suspended acoustical tile ceiling. There are at least two fire extinguishers with up-to-date inspection tags.

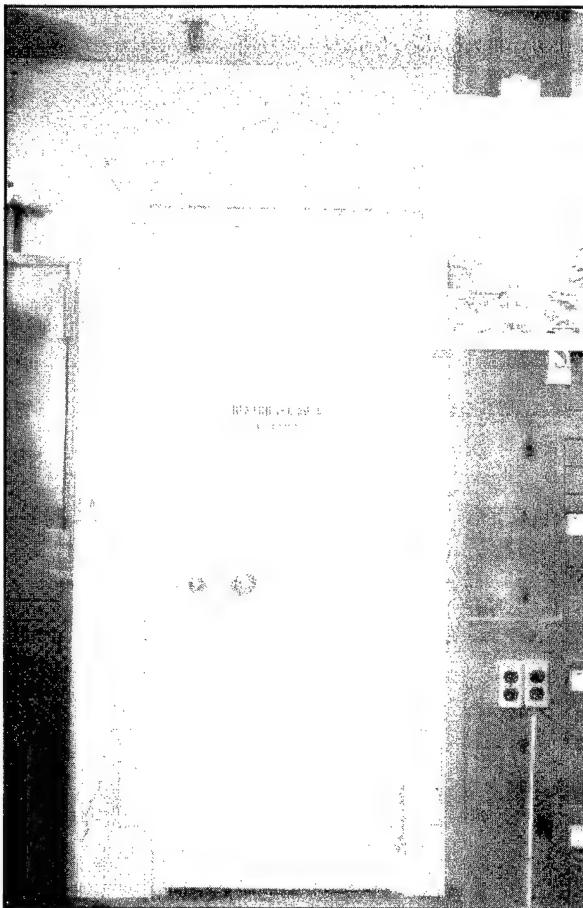


Figure 6. Door to the vault, which is used to store valuable artifacts in Repository 2.

ARTIFACT STORAGE

Storage Units

Repository 1

One cubic foot (1 ft^3) of artifacts from the Hospital Latrine Collection is on display in the Cavalry Museum in two wood-and-glass display cases (Figure 8).

Repository 2

The Museum Annex functions primarily as a storage area for nonarchaeological, cavalry-related artifacts that are being rotated from museum displays. Associated documentation also is curated with the artifacts.



Figure 7. Sprinkler system in Repository 2.

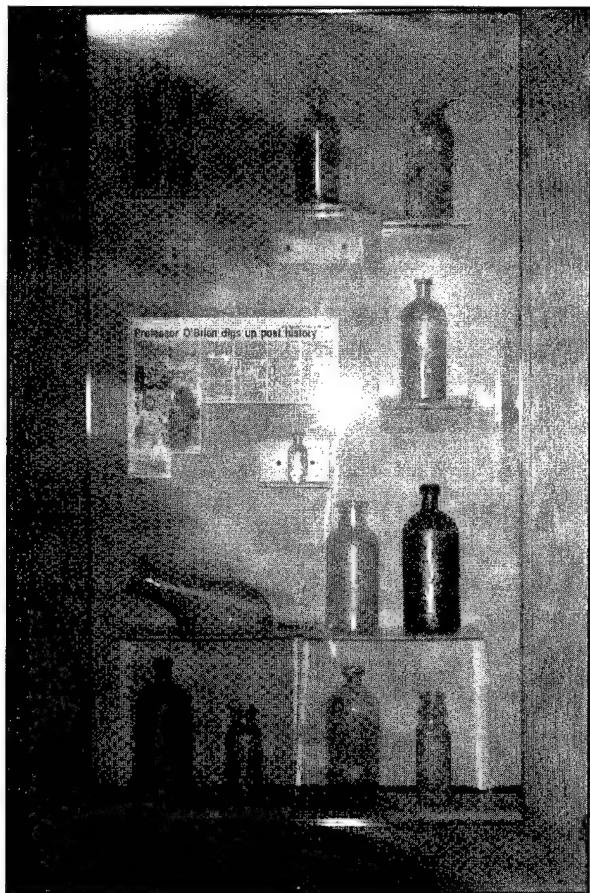


Figure 8. Display of Hospital Latrine artifacts in the Cavalry Museum.

Primary Containers

Repository 1

Primary containers in Repository 2 are two free-standing wood-and-glass display cases, each approximately 70 in high, 39 in wide, six (6) inches deep—18.95 ft³. Ten glass bottles and one ceramic vessel are displayed on plexiglass shelves in one case, and eight glass bottles and one ceramic vessel are displayed on plexiglass shelves in one case. An additional case with the same dimensions displays photographs and newspaper clippings of the excavation.

Repository 2

The skeletal remains from one Euroamerican fetus are housed in a glass jar with a metal screw-top lid.

Secondary Containers

Repository 1

No secondary containers hold archaeological collections in the glass cases in Repository 1.

Repository 2

No archaeological materials are stored in Repository 2.

HUMAN SKELETAL REMAINS

Fort Riley has one Euroamerican human fetus that was recovered from the Hospital Latrine Project.

RECORDS STORAGE

Written guidelines and standards that address paper records, photographic materials, and maps are in place for the archival care of associated documentation. Limited space is devoted to the storage of documentation. No associated archaeological documentation from Fort Riley projects is curated in the Cavalry Museum or the Museum Annex. Archaeological documentation now curated at Kansas State University and Wichita State University may be curated in Repository 2 in the future.

COLLECTIONS MANAGEMENT STANDARDS

Registration Procedures

Accession Files

The Cavalry Museum maintains accession files for museum objects.

Location Identification

Locations of materials are kept in the Museum's files.

Cross-Indexed Files

The Cavalry Museum's files are cross indexed.

Published Guide to Collections

A guide to the collections has not been published.

Site-Record Administration

The Cavalry Museum uses a trinomial archaeological site numbering system.

Computerized Database Management

A computerized database management system has not been implemented by the Cavalry Museum.

Written Policies and Procedures

The Cavalry Museum has a written curation policy that addresses minimum standards for acceptance, records-management, field-curation guidelines, loan procedures, deaccessioning, and inventory schedules. Objects on display were last inventoried in 1993.

Curation Personnel

Terry Van Meter is the director of the United States Cavalry Museum. William McKale is a museum specialist, and Thomas Metsala is McKale's assistant.

Curation Financing

Fort Riley last appropriated \$10,000 for curation in 1986–87. Curation financing is not adequate.

Access to Collections

Access to the collections is controlled by curation personnel. Exhibits personnel also have access to the collections. Access to the collections by researchers is dependent on proper credentials.

Future Plans

If funds and staff increase, plans for upgrading the curation program will be formulated.

COMMENTS

1. The United States Cavalry Museum is a professionally run facility that succinctly presents the history and development of the United States Cavalry.
2. The Hospital Latrine Collection provides important material documentation of the history of the cavalry at Fort Riley and the development of the fort itself.
3. The staff is well-trained and totally committed to the development of the museum.
4. The United States Cavalry Association sponsors the Cavalry Museum and the Cavalry Memorial Research Library. The Board of Trustees and board members are all retired Army officers. General Michael S. Davison is the chair of the Board of Trustees and Major General Lawrence E. Schlanser is the vice chair.

RECOMMENDATIONS

1. Appropriate funds to curate and conserve the Hospital Latrine Collection according to federal regulations and guidelines, especially the leather, textile, and ferrous metal artifacts.
2. Until the collections are consolidated, insure that Fort Riley collections stored at Kansas State University and Wichita State University are funded so that they may be curated and conserved according to federal regulations and guidelines.
3. Return and properly curate the collections stored at Wichita State University to Fort Riley, and provide funding for their care.

**KANSAS STATE UNIVERSITY,
DEPARTMENT OF ANTHROPOLOGY,
MANHATTAN**

REPOSITORY SUMMARY

(1) Volume of Artifact Collections: 214 ft³

Compliance Status: Collections require complete rehabilitation to comply with federal guidelines and standards for curation.

(2) Linear Feet of Records: Approximately three linear feet

Compliance Status: All associated documentation and reports require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation.

(3) Human Skeletal Remains: None

(4) Status of Curation Funding: No specific funding for curation exists. Any funds spent on curation of these materials must be derived from the overall budget of the Department of Anthropology at Kansas State University.

INTRODUCTION

DATE OF VISIT: 19–27 July and 15–17 September 1993

PERSON CONTACTED: Dr. Patricia O'Brien, Department of Anthropology

An estimated 214 ft³ of cultural materials are curated at Kansas State University (KSU) Department of Anthropology. All cultural materials and documentation were examined by the inspection team. Most of the KSU collection from Fort Riley is from the Hospital Latrine Collection—14HBS27. Many classes of historic artifacts such as glass bottles (some with intact contents), ceramics, ferrous and nonferrous metal, faunal materials, textiles, and leather are included in the collection (see Table 1). According to Dr. O'Brien, the leather artifact collection is the finest Civil War era collection of its kind in the country. Glass bottles and ceramics comprise the largest portion of the collection. Some uncataloged historic and prehistoric materials from a surface survey—Fort Riley Waterline East of U.P. Depot—also are curated at KSU.

Table 1.
Percentage of Historic Material Classes in the
Fort Riley Hospital Latrine Collection

Historic Material Class	Willard Hall	Room 301A	Rooms 10 and 11
Glass	77	49	100
Metal	9	4	0
Other	8	4	0
Ceramic/Crockery	3	22	0
Brick/Masonry	1	2	0
Leather	1	12	0
Worked Bone/Ivory/Shell	1	0	0
Faunal Remains	0	7	0
Total	<hr style="border: 0; border-top: 1px solid black; margin-bottom: 2px;"/> 100	<hr style="border: 0; border-top: 1px solid black; margin-bottom: 2px;"/> 100	<hr style="border: 0; border-top: 1px solid black; margin-bottom: 2px;"/> 100

REPOSITORY

Fort Riley archaeological collections are stored in three areas: Willard Hall, Burt Hall (Room 301A), and Burt Hall (Rooms 10 and 11).

Willard Hall

Willard Hall is a three-story classroom building with offices, laboratories, and restrooms. Fort Riley collections are stored in the 1,375 ft² archaeology laboratory, Room 320.

Burt Hall, Room 301A

Burt Hall is a three-story classroom building that contains offices, laboratories, and restrooms. Except for the repository, the entire third floor is used for storage of excess university property. The repository is located on the third floor in Room 301A and covers a 484 ft² area.

Burt Hall, Rooms 10 and 11

Rooms 10 and 11 are adjacent to one another in the basement of Burt Hall. For security reasons, four cubic feet of valuable mid-nineteenth-century whiskey flasks are curated in a locked wood cabinet in this repository.

Structural Adequacy

Willard Hall

Willard Hall is a cut-limestone-block classroom building that was constructed around 1893. Numerous windows, most of which have steel sashes, are located primarily on the north and south walls. The building has a limestone block foundation, and the floors are poured concrete covered with asphalt tile. Ceilings and walls are constructed of plaster over concrete. Numerous interior and exterior doors lead to the laboratories, offices, and classrooms. On the ground floor, two large exterior doors face north, and two large exterior doors face south.

Interior walls of the repository are poured concrete faced with plaster. The ceiling and floor are poured concrete. Ten steel-sash windows face north. All windows have venetian-type blinds. Two windows have air conditioners. Two solid wood doors lead to the exterior hallway. One door is blocked on the inside with file cabinets. Water pipes are connected to a sink along the eastern wall, and steam lines are connected to three radiators under the windows. A roof leak from July 1993 has been repaired.

Burt Hall Room 301A

Burt Hall is a cut-limestone-block classroom building that was constructed around 1893 as a classroom building with laboratories. It has a limestone block foundation. The interior walls of the repository are primarily poured concrete, although one slanting wall has been constructed of plasterboard. The ceiling is poured concrete, and the floor is poured concrete covered with asphalt tiles. Two double-hung wood-sash windows that face east have paper shades. One solid wood door leads to the exterior. Water sprinkler pipes are located overhead. Water pipes are connected to a sink on the south wall, and steam lines run to a radiator under the window. The repository is approximately 70% full.

Burt Hall Rooms 10 and 11

Rooms 10 and 11 in Burt Hall are structurally adequate (see Room 301A description above). Interior walls are made of limestone block. The floor and ceiling are poured concrete.

Environment

Willard Hall

Willard Hall is equipped with window air conditioners and steam heat. Humidity controls are absent, and environmental conditions are not monitored. Lighting is provided by non-UV-filtered fluorescent tubes. Regular repository maintenance is provided by Kansas State University janitorial staff.

Burt Hall Room 301A

Room 301A is steam heated but has no air conditioning. No humidity control exists, and environmental conditions are not monitored. Lighting is provided by non-UV-filtered fluorescent fixtures on the ceiling. The room is hot and humid in the warm months. Many secondary containers—paper bags and newspaper wrappings—are disintegrating rapidly due to the extreme heat. Fiberglass strapping tape that is used to seal the boxes of leather artifacts is failing because of the heat. Sensitive artifacts are in danger of destruction due to the adverse conditions in the repository.

Burt Hall Rooms 10 and 11

Rooms 10 and 11 are neither heated nor cooled. Humidity controls and environmental monitoring are absent. Lighting is provided by incandescent fixtures. Rooms 10 and 11 (Figure 9) are more environmentally stable than Room 301A. However, the damp and cold conditions in the winter would adversely affect the containers, labels, and bottles.

Pest Management

Willard Hall

A regular six-month pest management schedule exists. No evidence of pest infestation was observed.

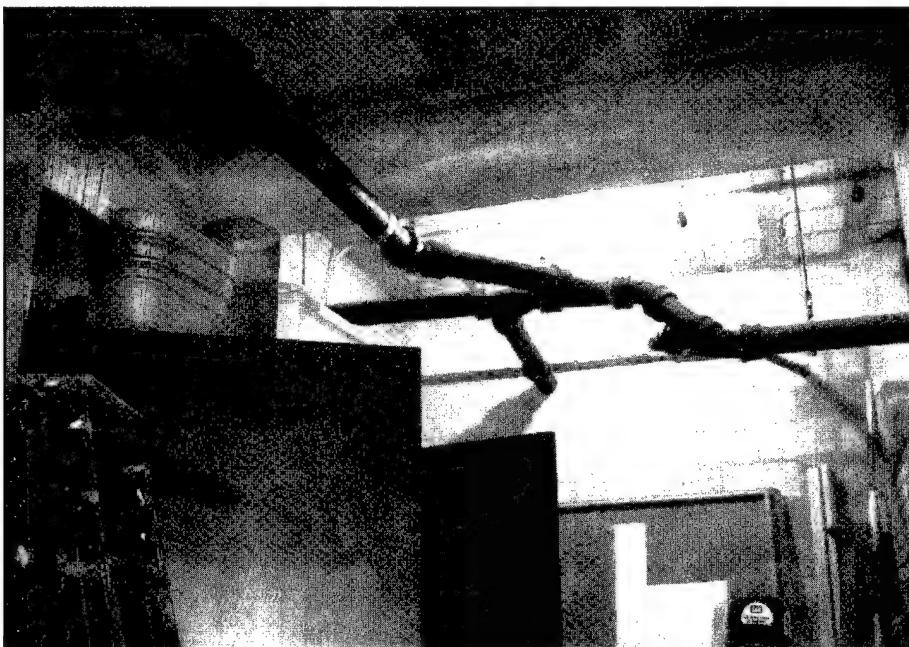


Figure 9. Ceiling in Burt Hall Rooms 10 and 11. Note sewer pipes directly over the wood cabinet where the Fort Riley whiskey bottle collection is curated.

Burt Hall Room 301A

A regular six-month pest management schedule exists. Unfortunately, infestation of *Dermestid* beetle larvae and adults was present in a type collection in one of the faunal boxes.

Burt Hall Rooms 10 and 11

A regular six-month pest management schedule exists. No evidence of pest infestation was observed.

Security

Willard Hall

Willard Hall has no intrusion alarm system. Doors have dead-bolt locks, and windows have standard sash locks. Access to the repository is controlled by Dr. O'Brien, whose office is adjacent to the repository. Since the repository is on the third floor of Willard Hall, forced entry through the windows can only be accomplished by ladder. Campus police regularly patrol the grounds surrounding the building.

Burt Hall Room 301A

The single, exterior door on Room 301A has a dead-bolt lock (Figure 10), but because of the isolated nature of the repository, security could be compromised. The single window is secured with a standard sash lock and the only access is by ladder. University police regularly patrol the exterior vicinity of the building, but the isolated nature of the repository—in essentially a dead-storage area—makes forced entry from inside the building possible.

Burt Hall Rooms 10 and 11

The door on Rooms 10 and 11 has a dead-bolt lock, and there are no windows. A solid metal door leads to the exterior (Figure 11). University police regularly patrol the area.

Fire Detection/Suppression Systems

Willard Hall has no fire detection or suppression systems. A ceiling sprinkler system is present in Burt Hall Room 301A, but there are no fire extinguishers, smoke detectors, or fire alarms. Rooms 10 and 11 in Burt Hall have no fire detection or suppression systems.

ARTIFACT STORAGE

Storage Units

Willard Hall

Approximately 56 ft³ of artifacts are stored in Willard Hall. Approximately 33 ft³ are stored in boxes on the floor (Figure 12), and approximately 23 ft³ are stored in wood drawers in a commercial-quality, steel-frame museum cabinet that is 74 in long, 24 in wide, and 76 in high. The Fort Riley Hospital Latrine Collection is curated in 10 drawers of this cabinet—eight drawers each are 36 in

long, 20 in wide, and four inches high. Two drawers each are 36 in long, 20 in wide, and eight inches high. Most drawers contain primary containers—acidic parcel-post boxes or open, acidic beer-can trays.

Burt Hall Room 301A

Two types of storage units contain the Fort Riley archaeological collections. One unit (Figure 13) has an enameled-steel frame with untreated plywood shelves and is 48 in long, 14.75 in wide, and 75 in high. A second type, consisting of 12 units, has an enameled-steel frame with enameled-steel shelves and is 36 in long, 24.5 in wide, and 96 in high (Figure 14). Fort Riley collections fill 12 shelving units and part of a thirteenth. Ninety percent (90%) of this space is presently in use. No labels have been placed on the shelves. Boxed artifacts are stacked one box high on most shelves. Some shelves contain smaller boxes that are stacked two-to-three boxes high.

Burt Hall Rooms 10 and 11

Artifacts in Rooms 10 and 11 are stored in a padlocked wood cabinet (Figure 15) with two doors and six shelves. The cabinet is 72 in high, 48 in wide, 36 in long (deep). The cabinet and shelves are treated with varnish.

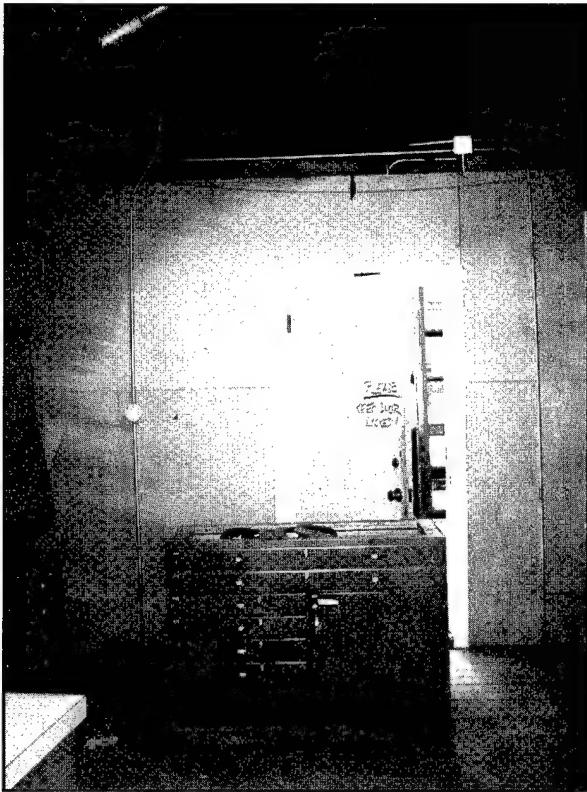


Figure 10. Entrance to attic storeroom—Room 301A.

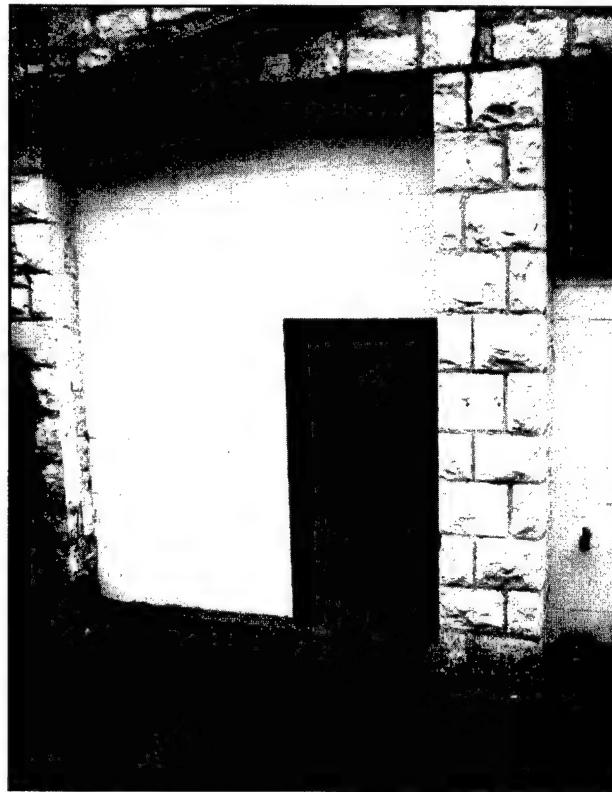


Figure 11. Metal door leading to Rooms 10 and 11.

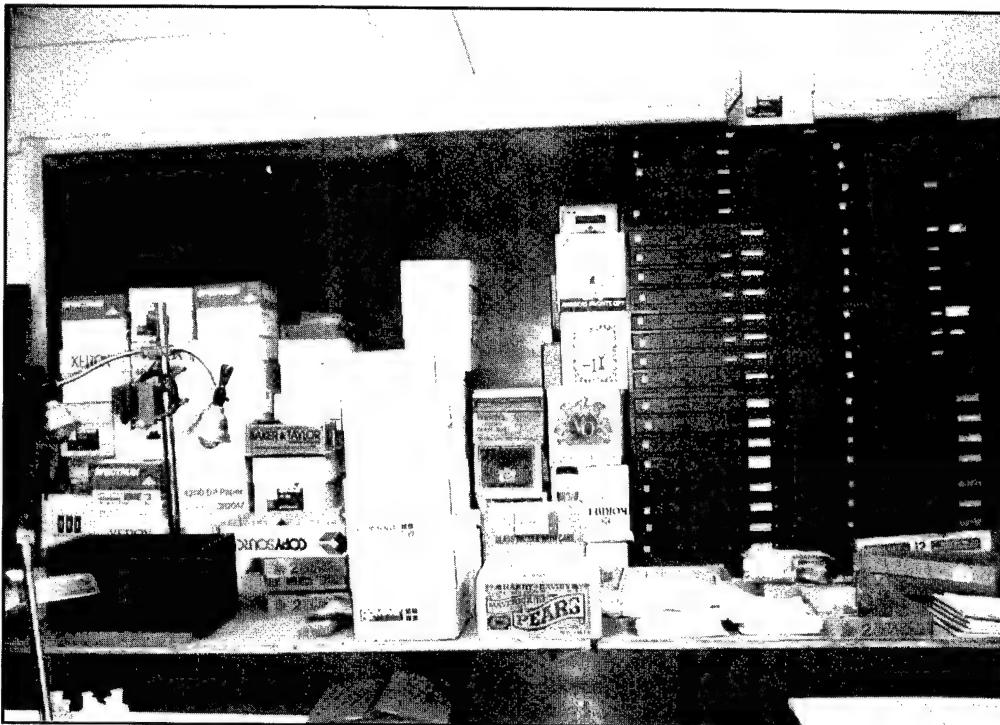


Figure 12. Primary containers in Willard Hall. Note the cabinet on the right, which houses some of the Hospital Latrine Collection.

Primary Containers

Willard Hall

Acidic cardboard boxes of various sizes contain approximately 58% of the Hospital Latrine Collection in Willard Hall. Boxes containing bottles are reused liquor and glass-jar boxes with cardboard inserts. Many of the additional boxes are reused acidic computer/copy paper boxes. Approximately 42% of the artifacts are stored in wood drawers. Labeling on boxes is inconsistent. Some boxes have no identifying information on them at all.

Room 301A

Acidic cardboard boxes of various sizes (Figure 16) hold collections. Boxes containing bottles are reused liquor and glass-jar boxes with cardboard inserts. Many of the additional boxes are reused acidic computer/copy paper boxes. Most of these boxes, with the exception of the leather collection, have no consistent label information. Some boxes have numbers or material class information recorded directly on the box in marker. Each box of the leather collection has a box inventory in an envelope that is attached with acidic strapping tape.

Rooms 10 and 11

Artifacts are stored in reused flap-fold liquor boxes with cardboard dividers (Figure 17). Boxes are unlabeled.

Secondary Containers

Willard Hall

Artifacts are stored in paper bags, plastic bags, and plastic vials (Figure 18). Other artifacts are stored loose in parcel-post box drawers (see Table 2). Most of the broken glass bottles are organized by provenience and stored in open, acidic cardboard beer-can trays (Figure 19).

Burt Hall Room 301A

All of the whole and reconstructed bottles are stored in reused liquor and glass-jar boxes. The remaining classes of artifacts are stored in newspaper wrapping, paper bags (Figure 20), plastic bags, and plastic vials. Most of the broken glass bottles are stored by provenience in open, acidic cardboard beer-can trays (Figure 21). A National Park Service leather expert at Fort Sumter recommended that leather artifacts be wrapped in muslin, packed in vermiculite, and stored in acidic cardboard computer/copy paper boxes (Figure 22).

Burt Hall Rooms 10 and 11

No secondary containers are used to hold Fort Riley collections in Rooms 10 and 11 (see Table 2).



Figure 13. Enameled-metal frame with wood shelves storage unit (background) in Room 301A.

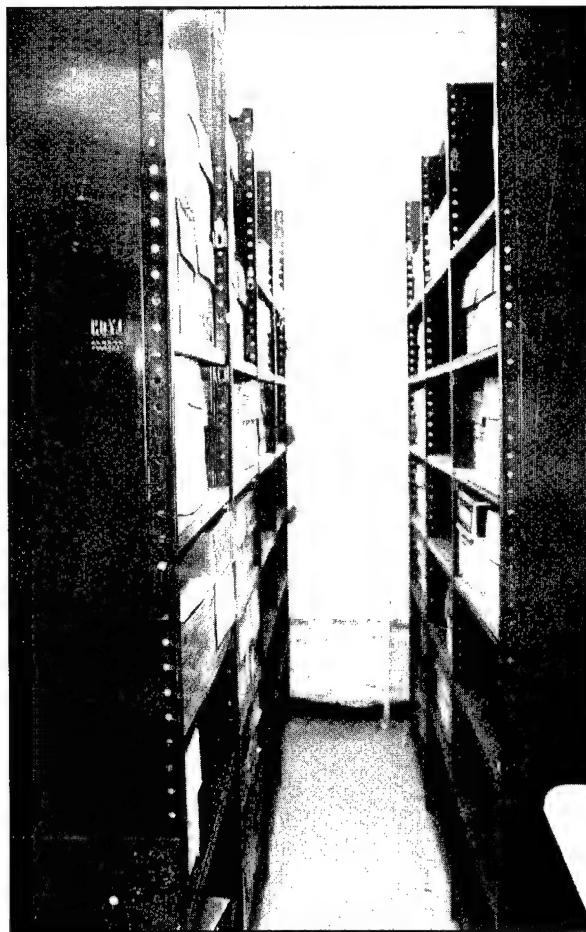


Figure 14. Enameled-steel shelving units in Room 301A.

Table 2.
Percentage of Secondary Containers in the
Fort Riley Hospital Latrine Collection

	Willard Hall	Burt Hall Room 301A	Burt Hall Rooms 10 & 11
Cardboard dividers	47	20	100
Beer-can trays	14	34	0
Paper bags	13	14	0
Plastic vials	8	1	0
Loose in box	8	5	0
Parcel-post boxes	4	1	0
Petri dishes	3	1	0
Foil	2	1	0
Plastic bags	1	1	0
Loose in box with newspaper	0	10	0
Muslin and vermiculite	0	12	0
Total	100	100	100

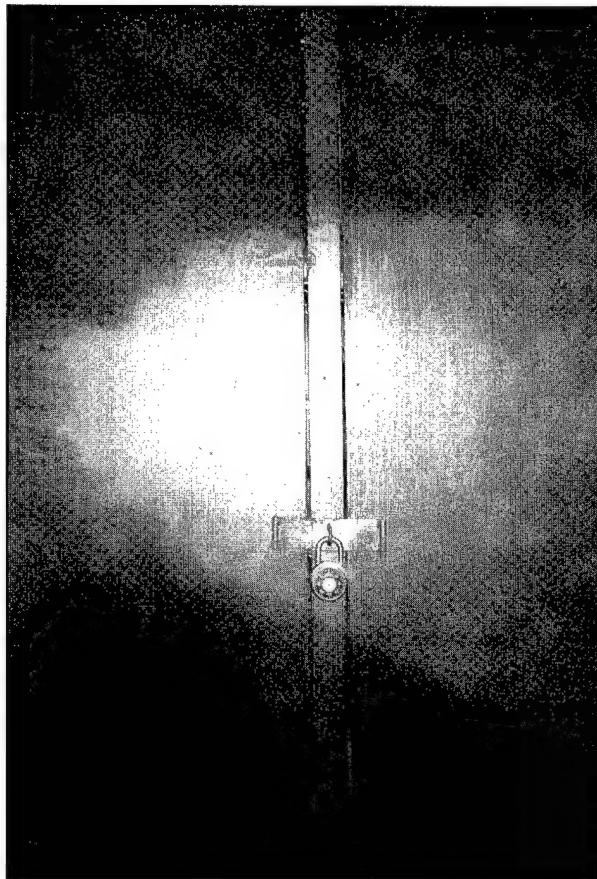


Figure 15. Locked wood cabinet in the basement of Burt Hall.

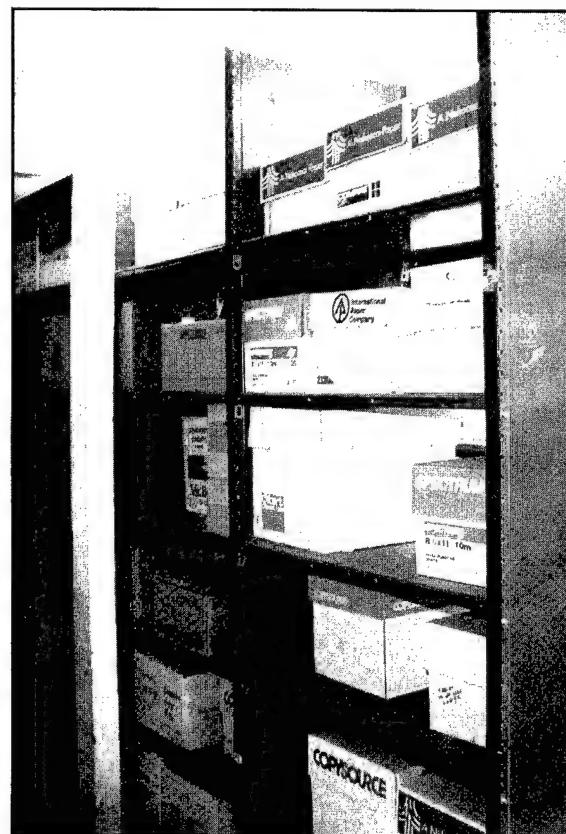


Figure 16. Various-sized primary containers in Room 301A.

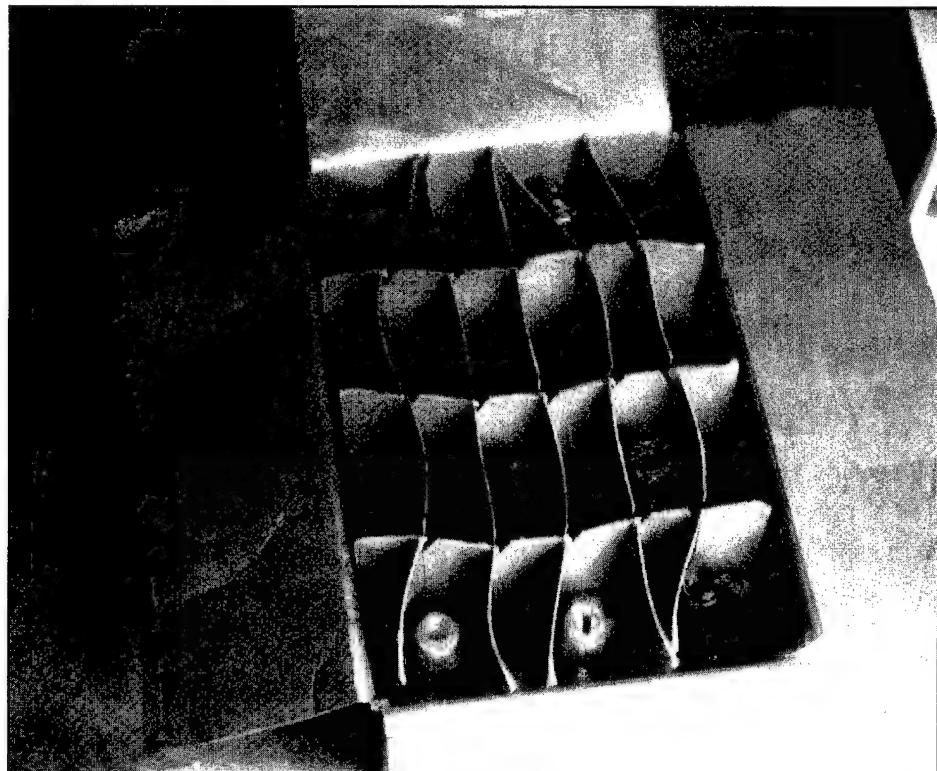


Figure 17. Primary container in Rooms 10 and 11.

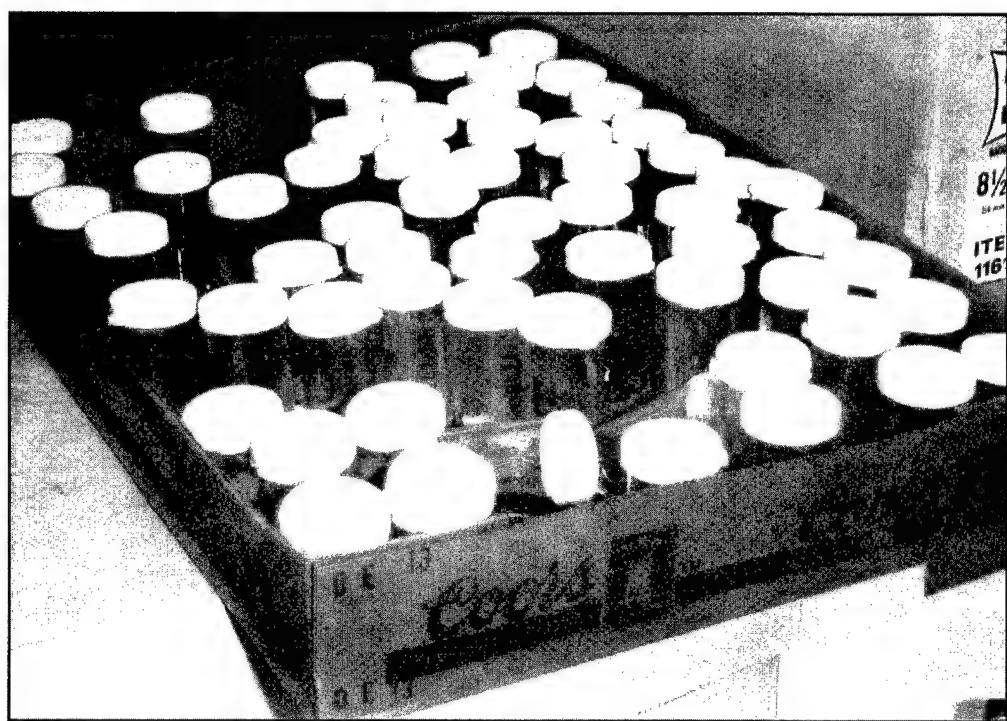


Figure 18. Plastic vials used as secondary containers in Willard Hall.

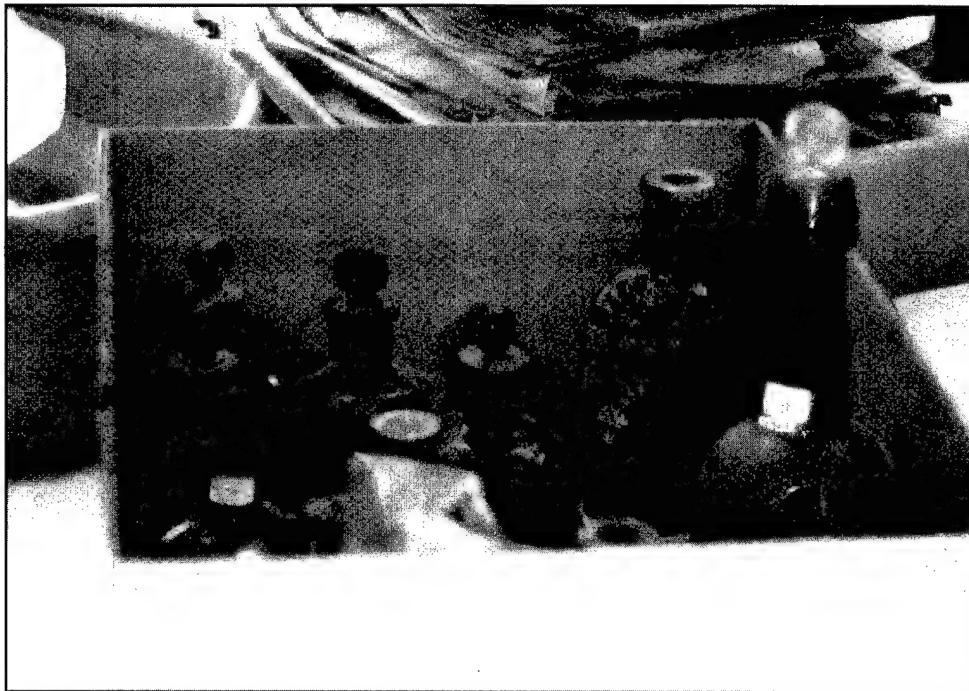


Figure 19. Reconstructed bottles are stored in an acidic box in Willard Hall.



Figure 20. A variety of secondary containers used in Room 301A.



Figure 21. Storage of broken glass in acidic beer-can trays in Room 301A.

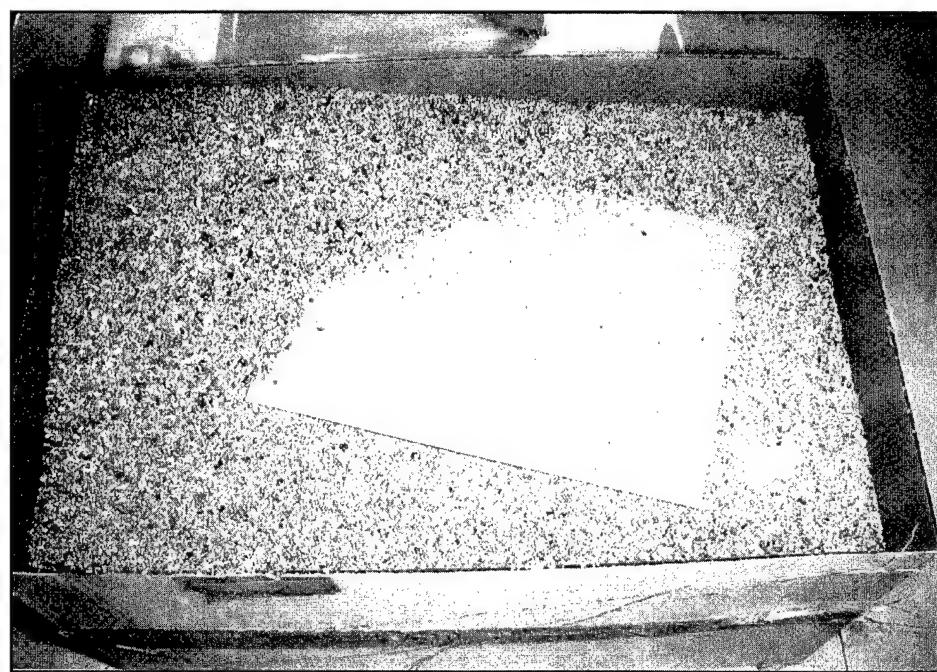


Figure 22. Storage of leather surrounded by muslin and packed with vermiculite in Room 301A.

Laboratory Processing and Labeling

Willard Hall

All secondary containers are labeled with the catalog number and, in some instances, with provenience information. All artifacts are labeled with catalog numbers in india ink with a nail-polish cover coat. With the following exceptions, many also are labeled with provenience information. Ferrous metal artifacts are labeled in india ink on acidic paper tags. Many bags have only one tag per bag. Fragile items such as textiles are unlabeled and require conservation treatment.

Burt Hall Room 301A

All secondary containers are labeled with catalog numbers and, in some instances, with provenience information. All artifacts are labeled with catalog numbers, and many, with the following exceptions, also are labeled with provenience information. Ferrous metal artifacts have acidic paper tag labels. Many bags have only one tag per bag. Fragile items such as textiles are unlabeled and require conservation treatment. Materials such as coal and lime are unlabeled.

Burt Hall Rooms 10 and 11

All artifacts are cleaned and labeled in India ink with a nail-polish cover coat.

HUMAN SKELETAL REMAINS

No human skeletal remains from Fort Riley collections are curated at KSU.

RECORDS STORAGE

Records documenting archaeological projects are located in two areas. Most records are stored in the archaeological laboratory in Willard Hall. Additional records are stored in the adjacent office of Dr. O'Brien.

Guidelines or standards do not exist for the archival care of associated documentation. Materials are not processed archivally for long-term storage, and duplicate copies of the documentation have not been made and curated in a separate location. No finding aids or accession data are available.

Paper Records

Approximately one linear foot of associated documentation is stored in a Hollinger box on a metal shelf in Willard Hall (Figure 23). Approximately one-half of a linear foot of associated documentation is stored in an acidic expandable file on the shelf (Table 3).

Primary containers are unlabeled. Associated documentation is in poor condition. Tears and abrasions were present on many of the documents, and the newspaper documents are discolored and brittle.

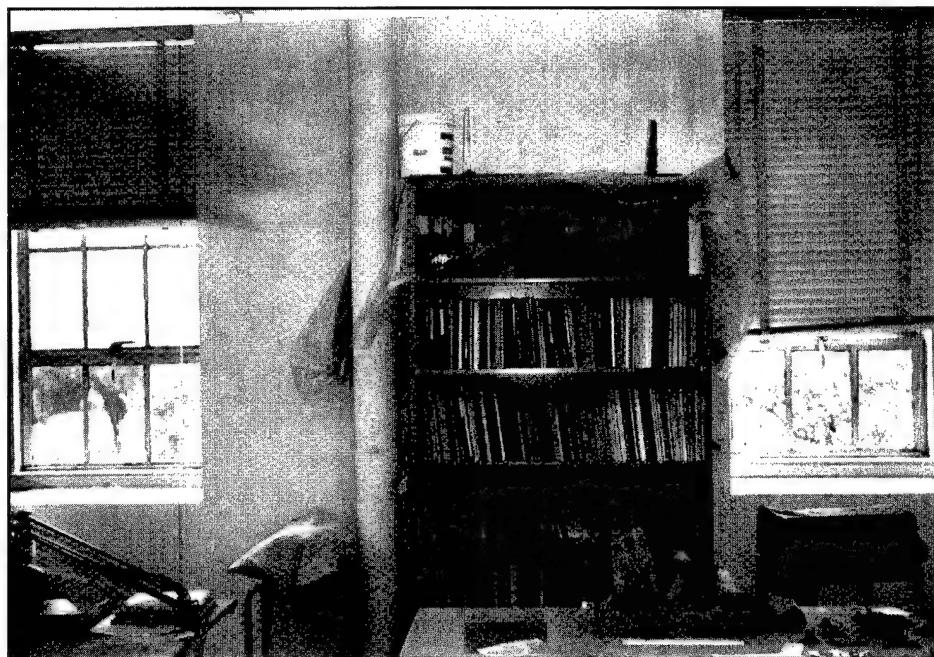


Figure 23. Fort Riley associated documentation is stored on the top shelf of a metal bookshelf in Willard Hall.

Approximately 10 linear inches of four-by-eight-inch index cards serve as the primary catalog for the Hospital Latrine artifacts. The cards contain typed information, including catalog numbers, artifact descriptions, provenience, and notes. The cards are stored in a standard four-by-eight-inch, metal card file in Willard Hall (Figure 24). The cards are in good condition but are beginning to show wear. The paper stock is discolored due to the acidity of the paper.

Approximately one-half of a linear foot of associated documentation is located in an unlabeled standard four-drawer file cabinet in Dr. O'Brien's office in Willard Hall. Approximately 19% of the records are administrative, 48% are background records, and 33% are report records. There is a mixture of secondary containers in the associated documentation. Some documentation is stored loose, some is in manila folders, and some has been bound. Labels are nonexistent. The general appearance of the documentation is fair to good; however, there are some contaminants (e.g., staples and paper clips) present.

Photographic Records

Approximately 10 archival storage sheets with black-and-white contact prints and 35-mm negatives are stored with the paper records in Willard Hall. Two boxed carousel slide trays also are stored with these paper records.

Computer Records

The catalog of the Hospital Latrine artifacts was being entered into a computer database.

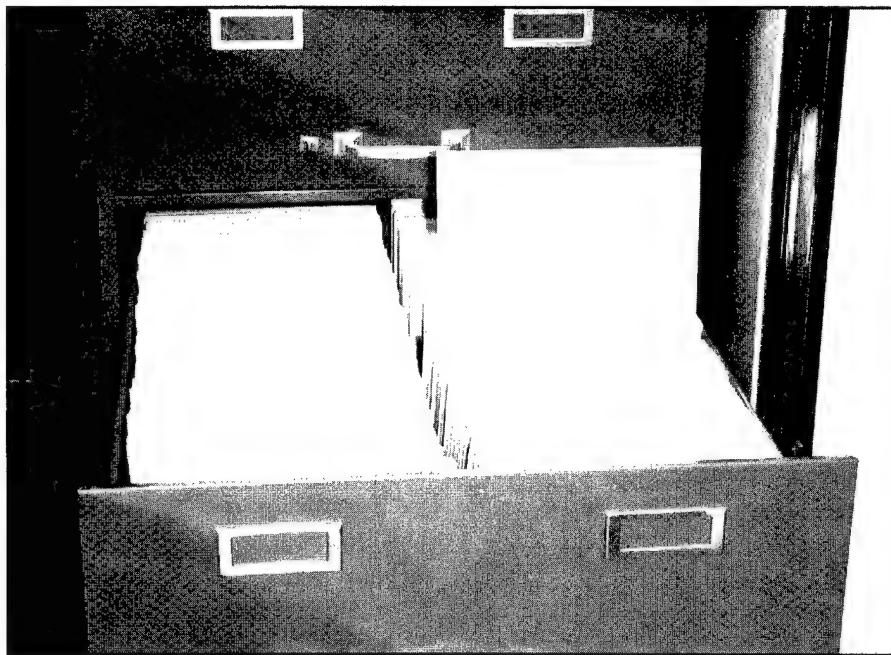


Figure 24. Artifact catalog in Willard Hall.

Table 3.
Approximate Percentage of Fort Riley
Documentation in Willard Hall

Type of Record	Percentage Present
Background	65
Analysis	15
Survey	7
Report	5
Administrative	2
Audiovisual	2
Excavation	2
Photographic	2
Total	100

COLLECTIONS MANAGEMENT STANDARDS

Registration Procedures

Accession Files

Accession files are maintained for archaeological collections at the Department of Anthropology.

Location Identification

Archaeological collection locations are recorded.

Cross-Indexed Files

Files are not cross indexed at any of the three collections storage areas.

Published Guide to Collections

A guide to the collections has not been published.

Site-Record Administration

A trinomial site-numbering system is followed.

Computerized Database Management

A computerized database management system has not been implemented.

Written Policies and Procedures

The Department of Anthropology does not have minimum standards for acceptance of archaeological collections, a curation policy, a records-management policy, field-curation guidelines, loan procedures, a deaccessioning policy, or an inventory policy. Collections are inventoried only when they are initially cataloged.

Curation Personnel

No full-time personnel are employed specifically for curation activities at KSU.

Curation Financing

A portion of Dr. O'Brien's salary and the Kansas State University's Department of Sociology and Anthropology budget fund curation activities.

Access to Collections

Access to the collections is controlled through Dr. O'Brien.

Future Plans

Dr. O'Brien anticipated moving from Willard Hall to Waters Hall where laboratory and curation facilities would be greatly improved. The proposed curation facility would have an HVAC system, greater security, and would be directly adjacent to the laboratory and Dr. O'Brien's office. After the move, all Fort Riley collections will be coalesced in the new facility.

COMMENTS

1. Kansas State University curates the most comprehensive historic archaeological collection from Fort Riley, a collection that is unique in terms of the history of the United States Cavalry, the westward expansion of the United States, and the history of Kansas.
2. The Fort Riley Collection has been acquired and processed using high standards of professionalism.
3. The collection will deteriorate rapidly unless rehabilitation is undertaken immediately.
4. Due to Dr. O'Brien's commitment to research at Fort Riley, Kansas State University is a logical choice for curating Fort Riley's archaeological collections.

RECOMMENDATIONS

1. Curate all federal archaeological materials stored at Kansas State University according to federal guidelines and standards.
2. Arrange, describe, and preserve all federal associated documentation according to federal guidelines and standards. Copy all associated documentation onto acid-free paper or on microformat. Prepare safety and security copies, and store them in a separate, secure, fire-safe location.
3. Curate artifacts in a stable environment.
4. Move leather artifacts from the Hospital Latrine Site to a more stable environment and have them examined by a conservator.
5. Conserve and label ferrous metal artifacts from the Hospital Latrine Site.
6. Conserve and label textiles from the Hospital Latrine Site.
7. Rebox and rebag the entire collection according to federal regulations and guidelines. This includes placing artifacts in acid-free boxes and stable secondary containers. Use custom-made, acid-free boxes in place of reused acidic liquor boxes.
8. Generate a master catalog as soon as Dr. O'Brien is finished with the analysis.

9. Include associated documentation in a bibliography that would complement the master catalog.
10. Provide funding to complete the computerization of the Hospital Latrine Site catalog.

**WICHITA STATE UNIVERSITY,
DEPARTMENT OF ANTHROPOLOGY,
WICHITA, KANSAS**

REPOSITORY SUMMARY

(1) Volume of Artifact Collections: Less than one cubic foot

Compliance Status: Collection requires complete rehabilitation to comply with federal guidelines and standards for curation.

(2) Linear Feet of Records: Less than one linear foot

Compliance Status: All associated documentation and reports will require complete rehabilitation to comply with existing federal guidelines and standards for archival presentation.

(3) Human Skeletal Remains: No human skeletal remains from Fort Riley are being curated at Wichita State University.

(4) Status of Curation Funding: No specific funding for curation exists. Any funds spent on curation of the materials must be derived from the overall budget of the Wichita State University Department of Anthropology.

INTRODUCTION

DATE OF VISIT: 26 July 1993

PERSONS CONTACTED: Dr. Arthur Rohn and Ms. Louise Burton

Approximately one cubic foot of prehistoric and historic artifacts from archaeological surveys on Fort Riley is curated by the Wichita State University (WSU) Department of Anthropology. These surveys, which were performed by A.H. Rohn Consulting Services in 1985 and 1986, resulted in the recovery of materials from sites 14RY51, -52, -314, and -411.

REPOSITORY

Structural Adequacy

The collections are located in the conservation laboratory (Room 104) of Henrian Hall (Figure 25), a two-story, brick, university classroom building that houses the art department. Henrian Hall, which is structurally sound, was constructed around 1943. The building also has an asphalt shingle roof. Many windows and interior doors are located on both floors. All windows on the ground floor have bars to prevent outside access. The main exterior doors are located on the east side of the building. Additional exterior doors are located on the west side of the building.

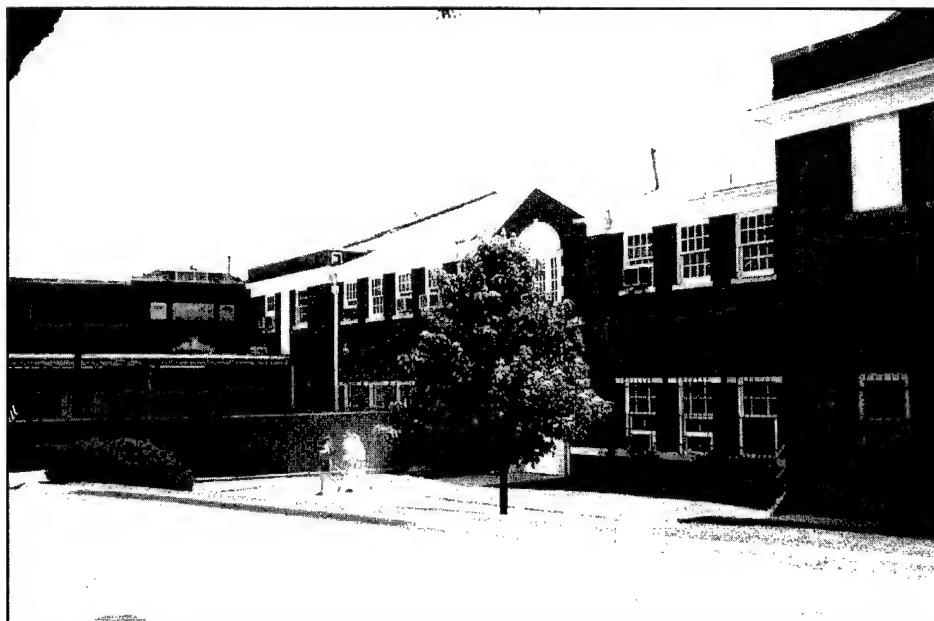


Figure 25. Front entrance to Henrian Hall.

Interior walls of the repository are made of plasterboard, and the floor is poured concrete covered with linoleum. Exposed water pipes cross two walls and the ceiling. Former water leaks from one pipe stain one wall and the ceiling. One wood, double-hung window faces east. A radiator is located under the window (Figure 26). One solid wood exterior door faces west.

Environment

The conservation laboratory has steam heating and no air conditioning. Temperature and humidity are not monitored. At the time of the visit, portable fans were set up to provide air circulation. Shades are not present on the windows. Lighting is by fluorescent lights without UV protection.

Pest Management

A periodic Wichita State University pest management regimen has been established. No infestations were noted.

Security

Security consists of WSU police patrols, dead-bolt locks (Figure 27), window locks, and bars on the exterior windows (Figure 28). Access to the room is controlled by Dr. Rohn and Louise Burton. Permission to gain access to the collections is acquired from Dr. Rohn and Louise Burton.

Fire Detection/Suppression Systems

Overhead sprinklers are present in the conservation laboratory, but there are no fire extinguishers or smoke detectors.

ARTIFACT STORAGE

Storage Units

Primary containers are stored on a painted wood shelving unit approximately eight feet high, 15 ft long, and four feet deep.

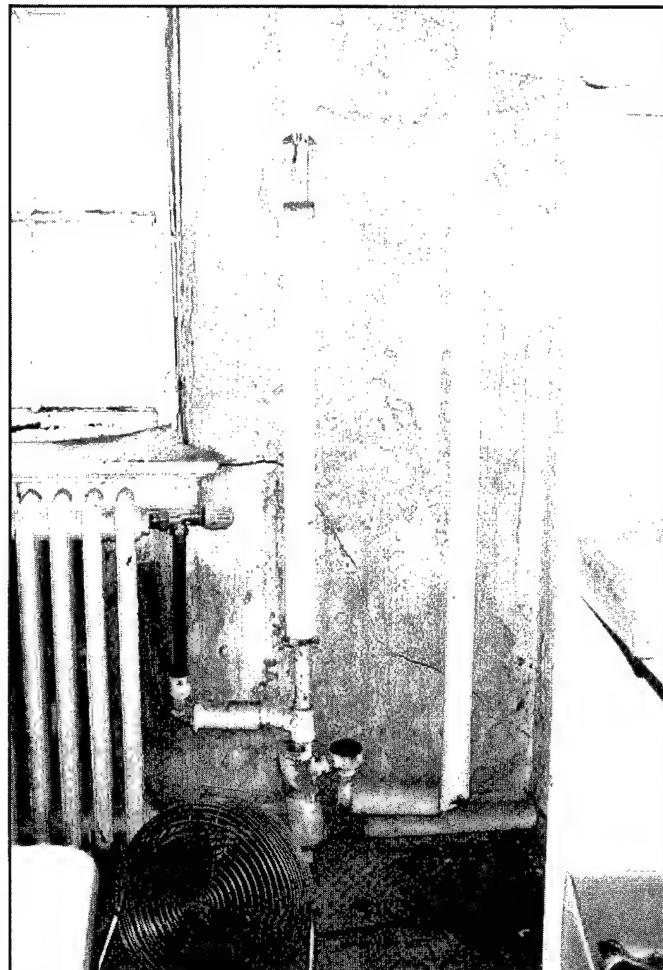


Figure 26. Damage caused to the wall by extreme environmental conditions in the collection storage area in Henrian Hall.



Figure 27. Door leading to the collection storage area in Henrian Hall.

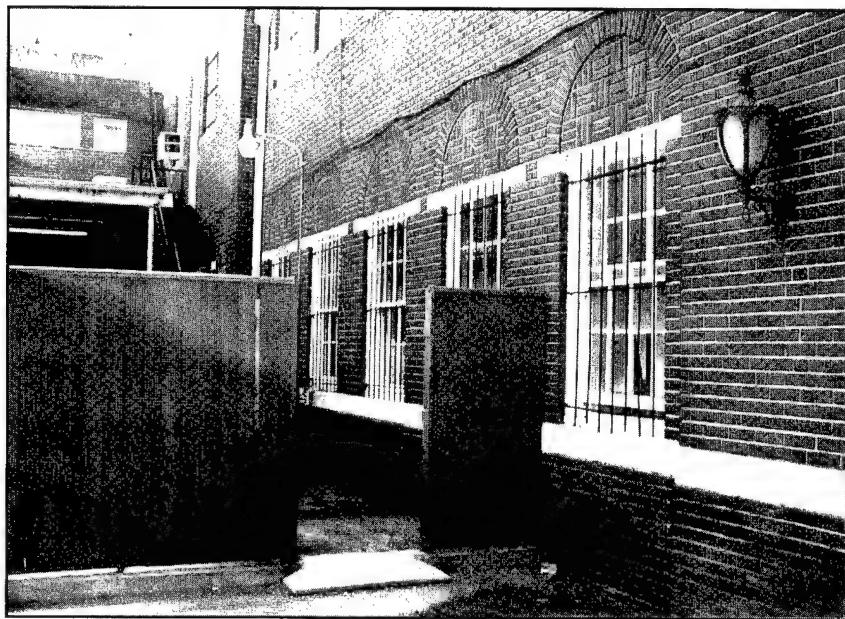


Figure 28. Bars on windows to the collections storage area in Henrian Hall.

Primary Containers

Artifacts are stored in acidic shoe boxes of three sizes (Figure 29)—three boxes are 13 in by 6.5 in by 2.75 in; two boxes are 13 in by 6.5 in by 2.5 in; and three boxes are 13.5 in by 6.75 in by 1.5 in.

Secondary Containers

Secondary containers include paper bags (36%) and plastic bags (14%) (Figure 30). Some artifacts are stored loose in the primary container (50%) (Figure 31).

Laboratory Processing and Labeling

All artifacts have been cleaned, and approximately 63% of the artifacts are labeled. Predominate material classes are chipped stone, ceramics, and daub (see Table 4 for more details).

Table 4.
Percentage of Material Classes of Artifacts at
Wichita State University

Box No.	Prehistoric			Historic		
	Chipped Stone	Ceramics	Daub	Glass	Metal	Plastic
1	70	30				
2	30		70			
3	100					
4	100					
5	100					
6	90			5	5	
7	90	10				
8	95					5
Percentage of All Boxes	84	5	9	<1	<1	<1

HUMAN SKELETAL REMAINS

No human skeletal remains from Fort Riley are curated at Wichita State University.

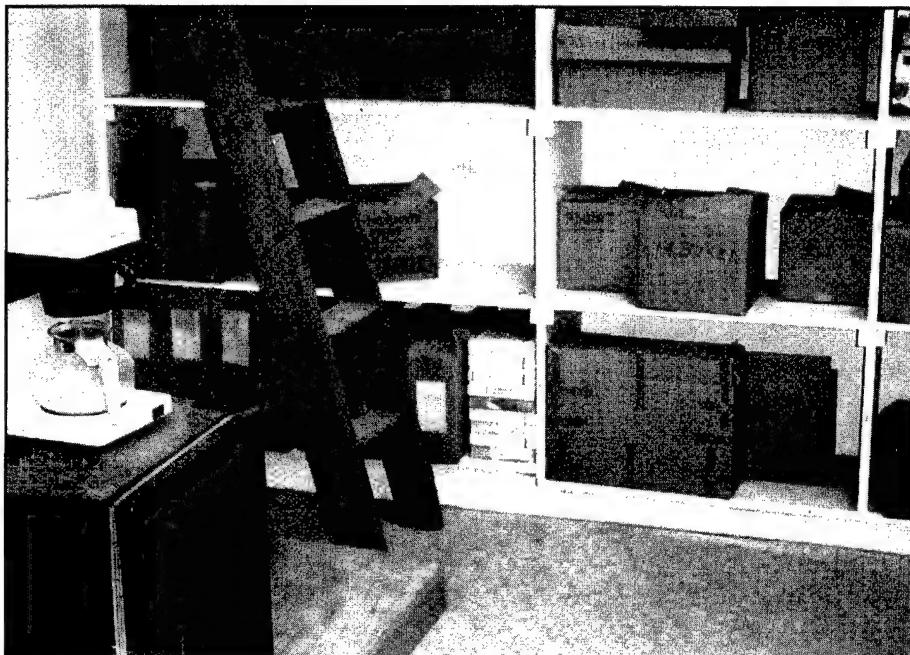


Figure 29. Fort Riley collections are stored on the lowest shelf on the left.



Figure 30. Paper and plastic bags are used as secondary containers.

RECORDS STORAGE

Paper records are stored in one drawer of a standard four-drawer metal file cabinet (Figure 32) in Henrian Hall. Associated documentation measures less than one linear foot (0.5). Approximately 25% of the documentation is administrative records, 25% is a combination of excavation and analysis records, and 50% is report records.

Documentation is stored in manila folders with adhesive labels and is filed by archaeological site number. Label information either is typewritten or has been written in pencil. The general appearance of the documentation is fair to good. No security copies have been made, and the records have not been processed archivally. No finding aids or accession data are available.



Figure 31. Fort Riley artifacts stored loose in a primary container.

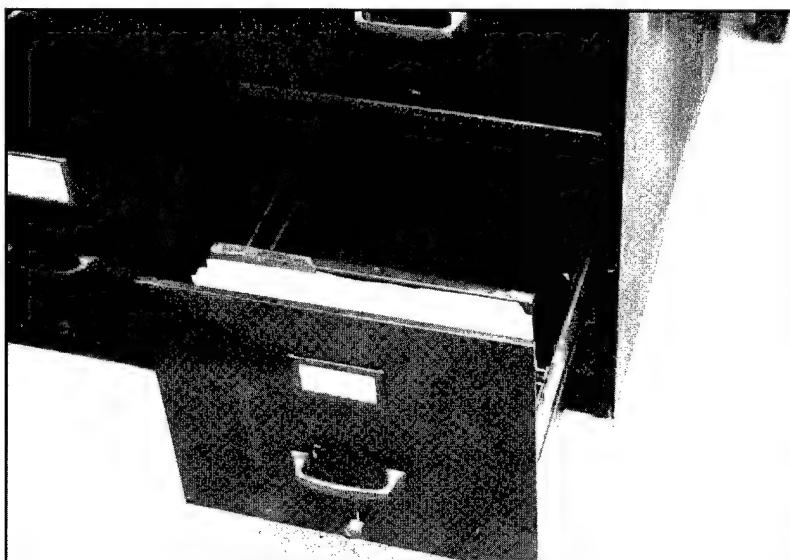


Figure 32. Fort Riley documentation is curated in a metal file cabinet in Henrian Hall.

Collections Management Procedures

Registration Procedures

Accession Files

Accession files are maintained for archaeological collections at the Department of Anthropology.

Location Identification

Archaeological collection locations are recorded.

Cross-Indexed Files

Files are not cross-indexed at the Department of Anthropology.

Published Guide to Collections

A guide to the collections has not been published.

Site-Record Administration

A trinomial site-numbering system is followed.

Computerized Database Management

A computerized database management system has not been implemented.

Written Policies and Procedures

The Department of Anthropology does not have minimum standards for acceptance of archaeological collections, a curation policy, a records-management policy, field-curation guidelines, loan procedures, a deaccessioning policy, or an inventory policy. Collections are inventoried only when they are initially cataloged.

Curation Personnel

Dr. Rohn, Dr. Donald Blakeslee, and Louise Burton are involved in curation, but none are full-time curators.

Curation Financing

Curation funds are allocated from the Department of Anthropology budget.

Access to Collections

Access to the collections is controlled through Dr. Rohn, Dr. Blakeslee, and Louise Burton.

Future Plans

There are no plans to change the curation practices already in place.

COMMENTS

1. The environmental controls in place are not adequate for the long-term care of archaeological materials.
2. Fire detection devices are absent in the repository.
3. The pest-management program is not regularly monitored or controlled.
4. Archival storage units or containers are not used for the archaeological materials.
5. Policies and procedures for the long-term management of archaeological materials have not been written or implemented.

RECOMMENDATIONS

1. Return collections to Fort Riley until an acceptable curation facility is identified.
2. Rehabilitate archaeological materials and associated documentation according to federal laws and regulations.
3. Archivally process the associated documentation.
4. Prepare safety and security copies of the associated documentation, and store them in a separate, secure, fire-safe location.

6

SUMMARY

Six separate repositories at three facilities in Kansas curate Fort Riley archaeological collections (Table 5). Each of these facilities and their repositories was visited by the assessment team. At the time of the assessment, two Fort Riley collections and four associated reports were located. An additional 10 collections, six repositories, and 12 reports were identified during the AEC project (see Appendixes II and III). A building evaluation, survey questionnaire, and collections and documentation evaluation were completed for each repository (Table 6).

Table 5.
Number of Repositories Curating
Fort Riley Archaeological Collections

Facility	Number of Repositories
United States Cavalry Museum	2
Kansas State University	3
Wichita State University	1

Table 6.
Summary of Fort Riley Archaeological Collections

Location	Cubic Feet of Artifacts	Linear Feet of Documentation	Human Skeletal Remains
United States Cavalry Museum	1	0	1 ¹
Kansas State University	214	3	0
Wichita State University			0
Total	216	<1 3.5	1

¹Euroamerican fetus recovered during the Hospital Latrine Project.

REPOSITORIES

Of the six repositories that have Fort Riley archaeological collections, only two, Building 30/205 and Building 203 of the Cavalry Museum, were modified specifically to meet the requirements for long-term artifact storage. In each of these buildings adequate environmental control systems, pest management, security, and fire safety measures are present. The remaining four repositories, located at Kansas State University and Wichita State University, are modified classrooms that were not designed or adapted to meet the requirements of an adequate curation center.

Environmental Controls

Adequate environmental monitoring and control systems are present in only two of the six repositories (Table 7). The Cavalry Museum and its Museum Annex are equipped with environmental management and control systems that meet the requirements of 36 CFR Part 79. Most of the other repositories are heated and air conditioned, except for Rooms 10 and 11 in Burt Hall at Kansas State University. Unstable environmental conditions have contributed, and will continue to contribute, to the deterioration of collection materials and associated records.

Pest Management

Each of the six repositories has a pest management program (Table 7). Insect pests and insect damage to collection materials were noted in only one repository, Burt Hall, Room 301A, Kansas State University.

Security

Only two repositories, the Cavalry Museum and its Museum Annex, meet federal standards for security of archaeological collections (Table 7). Minimal standards include intrusion alarms, motion detectors, limited access, absence of windows, and dead-bolt locks on doors.

Fire Safety

Only the Cavalry Museum (Building 30/205) is equipped with adequate fire detection and suppression devices that include smoke alarms, a sprinkler system, and up-to-date fire extinguishers (Table 7). The Museum Annex (Building 203) has both a sprinkler system and up-to-date fire extinguishers, but no smoke detectors. Among the other repositories, Willard Hall (KSU) and Henrian Hall (WSU) have ceiling sprinkler systems but no smoke detectors or fire extinguishers. Fire detection and suppression systems in Burt Hall (KSU)—Room 301A and Rooms 10 and 11—are nonexistent.

Table 7.
Presence/Absence of Repository Infrastructure Controls

Location	Environmental Controls	Pest Management	Security	Fire Control	Full-Time Curator
United States Cavalry Museum					
Building 30/205	Yes	Yes	Yes	Yes	Yes
Building 302	Yes	Yes	Yes	No	Yes
Kansas State University					
Willard Hall	No	Yes	No	No	No
Burt Hall					
Room 301A	No	Yes	No	No	No
Room 10/11	No	Yes	No	No	No
Wichita State University					
Henrian Hall	No	Yes	No	No	No

ARTIFACT CURATION

Only at the Cavalry Museum have federal artifacts been properly prepared for long-term curation. The museum is used primarily for exhibitions rather than storage, and it contains only a small number of the Hospital Latrine Project materials. Few artifacts are on display.

At the Kansas State University and Wichita State University repositories, few artifacts have been properly packaged for long-term curation. Artifacts were observed in acidic cardboard containers that were often over stacked, over packed, compressed, or torn. Not all primary containers have adequate label information. Secondary containers were also made of acidic paper materials and were frequently labeled poorly.

HUMAN SKELETAL REMAINS

No Native American human skeletal remains were present in the Fort Riley collections. However, there was one Euroamerican fetus that was recovered during the Hospital Latrine Project. The skeletal material is being curated in the Museum Annex at Fort Riley.

RECORDS MANAGEMENT

There are approximately 3.5 linear feet of records associated with the Fort Riley Hospital Latrine Project and the resulting artifact collections. Approximately three linear feet are being housed at Kansas State University, and approximately one-half linear foot of records is at Wichita State University.

Much of the project documentation is beginning to deteriorate. Pages are discolored because of the use of acidic paper. None of the documentation has been preserved on archival quality paper, and no security copies exist. Failure to implement archival protocols will lead to continued deterioration of the documentation.

MANAGEMENT CONTROLS

Basic management tools—e.g., accession records; inventories; and written policies and procedures for curation, records management, and loans—are present only at the Cavalry Museum. Kansas State University and Wichita State University have implemented partial management control. Failure to meet federal curation standards has led to substandard care of many of the Fort Riley archaeological collections.

GENERAL RECOMMENDATIONS

The MCX offers the following recommendations to bring the Fort Riley collections into compliance with 36 CFR Part 79.

I. DEVELOP A PLAN OF ACTION

A plan of action for archaeological materials must minimally address (1) long-term housing of the collections, (2) rehabilitation of artifacts, (3) rehabilitation of the associated records, and (4) management of these data.

II. COALESCE COLLECTIONS

In this era of cost efficiencies, the MCX recommends coalescing collections into one regionally based repository for the curation and long-term management of archaeological collections. Funds may be required for capital improvements to the facility to meet the federal curation standards.

III. DEVELOP COOPERATIVE AGREEMENTS

In order to ensure the professional curation of its archaeological collections, Fort Riley should develop cooperative agreements with repositories for long-term curation.

IV. DEDICATE SPACE FOR STORAGE OF COLLECTIONS

Minimal curation standards in a repository must include the following five points.

1. Storage space should be adequate environmentally to maintain stable temperature and humidity levels, in addition to maintaining environmental requirements for the types of objects being curated.
2. Storage space should minimize the number of exterior walls, windows, and doors in order to (a) decrease the chance of condensation on walls and windows during seasonal temperature changes, (b) enhance security, and (c) increase energy efficiency.
3. Water lines associated with fire suppression systems are the only kind of overhead pipes allowed in a collections storage area. Water pipes and sewer pipes should be removed.

4. Electrical junction boxes and gas and electric meters should be outside the collections storage area in order to limit access by noncuratorial staff.

5. Storage areas should be large enough to accommodate existing collections as well as projected growth needs.

V. SECURITY, FIRE PROTECTION, AND MAINTENANCE OF COLLECTIONS STORAGE AREA

A collections facility must maintain systems for the security, fire protection, and maintenance of the collections storage area that minimally incorporate the following.

Security

Entrances to collections storage areas should have metal or solid-core wood doors. Doors should have dead-bolt and key locks, and the storage area should be protected by an electronic intrusion detection system. Keys to the storage area must be restricted to repository personnel. All cabinets with archaeological collections should be kept locked, unless items are being used for research. Researchers and visitors should not be allowed access to the collections storage area unless accompanied by curatorial staff. When researchers and/or visitors request permission to work with objects, it is best that the objects be taken to an area separate and outside the collections storage area.

Fire Protection

A fire detection and suppression system must be installed to safeguard collections and personnel. Smoke detectors and fire extinguishers matched to the types of materials that might catch fire must be placed in all parts of the collections storage area. Fire extinguishers must be properly maintained and placed in clearly marked positions. Sprinkler systems should also be installed.

Maintenance of Facility

A scheduled plan for maintenance that includes routine sweeping, mopping, and dusting by curatorial staff or bonded janitorial service must be established in the collections storage area. In addition, an integrated pest management program, which includes regular monitoring for signs of pest infestation, must be implemented. Smoking, eating, and drinking should be forbidden in the collections storage area.

VI. INVENTORY AND REHABILITATE EXISTING ARTIFACT COLLECTIONS

The physical condition of all artifacts should be inspected. A treatment priority should be assigned to all artifacts so that those needing immediate treatment are rehabilitated first. A general inventory must be produced. Rehabilitation must include the following.

1. Inventory and catalog all artifact collections according to professional museum standards.
2. Label and package artifacts to one consistent standard, and place them in archivally stable containers.
3. Conduct a condition assessment, using curation professionals, of all perishable artifacts.
4. Implement a long-term conservation program.
5. Develop a collections manual to aid in the management of collections.

These steps will result in the stabilization and preservation of existing collections and will insure their management in the most cost-efficient manner for the federal taxpayer. Proper management of these collections will insure that scholars, students, and the public have access to, and benefit from, the Fort Riley archaeological collections, which presently do not approach their potential for use.

VII. DEVELOP A FORMAL ARCHIVES MANAGEMENT PROGRAM

A plan of action for the archives must be developed immediately to establish archives-deficiency priorities within the repositories that contain Fort Riley records. Following the survey, all records must be coalesced and rehabilitated to comply with existing federal guidelines and standards for modern archival practices. Archives rehabilitation includes eight steps.

1. Develop an archives inventory management program that uses microcomputer technology.
2. Inventory and catalog all associated records to standards with those of a professional museum.
3. Using professional staff, conduct a condition assessment of all records, and implement a long-term conservation program for appropriate records.
4. Conserve significant records that are currently at risk.
5. Transfer general records into acid-free folders and appropriate archival storage units.

6. Place photographs, negatives, and slides into archival, polyethylene sleeves, acid-free envelopes, and appropriate storage units.
7. Catalog and curate large-scale maps in metal map cases.
8. Produce duplicate/backup copies of associated records that will be stored in a separate location.

Proper management of the Fort Riley archaeological archives will provide opportunities for scholars, students, and the public to benefit from the information contained in these records, a major public benefit that currently is not being realized.

VIII. FULL-TIME MANAGER FOR ARCHAEOLOGICAL COLLECTIONS

It is imperative that a collections manager be hired to care for the archaeological collections. This person should have professional qualifications and prior experience in collections management. Collections managers minimally are responsible for the following.

1. Insuring that adequate written policies and procedures are in place and are shared so that staff have appropriate guidance.
2. Insuring that management records are kept up-to-date, complete, properly monitored, and readily available to researchers.
3. Managing a computerized data base.
4. Insuring that artifacts can be located easily.
5. Insuring that objects are labeled properly.
6. Insuring that the artifacts and records are maintained under physically secure conditions, whether in storage, on exhibit, or under study.
7. Performing periodic inventories and inspections of collections and records to insure their long-term survival.

The MCX regards all the aforementioned recommendations as the minimal requirement that must be addressed in order to bring Fort Riley into compliance with federal standards on archaeological curation.

SPECIFIC RECOMMENDATIONS FOR THE FORT RILEY COLLECTIONS

The following specific recommendations are proposed to address issues identified during the MCX inspection of Fort Riley archaeological collections and repositories.

1. Appropriate funds to consolidate, curate and conserve the Hospital Latrine Collection according to Federal regulations and guidelines.
2. Until the collections are consolidated, insure that Fort Riley collections stored at Kansas State University and Wichita State University are funded so that they may be curated and conserved according to Federal regulations and guidelines.
3. Return the collections at Wichita State University to Fort Riley. Minimally, archaeological materials and associated documentation currently located at Wichita State University should be moved from Henrian Hall to the archaeological laboratory in McKinley Hall.
4. Kansas State University should meet federal regulations and guidelines, if it is designated a long-term curation facility.
5. Rehabilitate archaeological materials according to federal regulations and guidelines. Leather, textile, and ferrous metal artifacts need immediate attention.
6. Arrange, describe, and preserve all associated documentation and reports according to federal guidelines and standards. Specifically, copy all associated documentation onto acid-free paper or on microformat. Prepare safety and security copies, and store them in separate, secure locations.

APPENDIX I

BIBLIOGRAPHY FOR FORT RILEY

O'Brien, Patricia J.

1988 *An Archeological Test of a Waterline Replacement at Ft. Riley, Kansas*. Submitted to the Fort Riley Environmental Office.

Robinson and Associates (with Patricia J. O'Brien)

1989 *Fort Riley: An Historic Overview*. 2 vols. Submitted to the U.S. Army Corps of Engineers, Kansas City District, Purchase Order DACA41-88-M-0145.

Rohn, Arthur, and Blasing, Robert K.

1986 *Archeological Testing of Four Prehistoric Sites at Fort Riley, Kansas*. Submitted to the U.S. Army Corps of Engineers, Kansas City District Contract, DACA41-85-M-0093.

West, Dixie L.

1982 *Analysis of Faunal Remains Recovered from the Hospital Latrine at Fort Riley, Kansas*. Unpublished Master's thesis, Kansas State University, Department of Anthropology, Manhattan.

APPENDIX II

SUMMARY OF CURRENT LOCATIONS OF ARCHAEOLOGICAL COLLECTIONS FROM FORT RILEY, KANSAS, AS OF JANUARY 1996

Repository	Repository POC	Telephone	Collection ID	Site Numbers	Fieldwork Dates	Excavator/Collector	Collection Size	Description of Materials	Antiquity/Archaeological Period	Cultural Affiliation	Basis of Determination	Section 5 Materials
Fort Larned National Historic Site, Kansas Or, Loan from Fort Riley Environmental Offices			Hospital Latrine Project	14HBS27	1979	Kansas State University, Manhattan	<1 cu. ft.	Glass bottles	Historic Military	Not Listed		None
Fort Riley Environmental Offices	John Denty	(913) 239-8618		14RY109-14RY144, 14RY322, 14RY411; 14GE169-172	1992	University of Illinois, Kevin McGowan	5 cu. ft.	Lithics, Metal, Faunal, Ceramics, Glass, Coal, Rubber, Shell	Prehistoric Workshops & Campsites, Early Archaic, Late Ceramic, Hopewellian, Hopewell, Hettotic Farmstead	Not Listed		None Identified
Fort Riley Environmental Offices	John Denty	(913) 239-8618		14GE533 Republican Flats, Isolated Finds	Feb. 4, 1977	Terry Johnson	<1 cu. ft. (78 Artifacts)	Ceramics, Glass	Historic Military Dumps	Not Listed		None Identified
Geo-Marine (Temporarily)	Dwayne Peter	(214) 423-5480	Training Area 79 Survey (Project #1310005)	14RY160, 162	1994	Geo-Marine	<1 cu. ft. (78 Artifacts)	Glass, Ceramics, Coal, Metal, & Shell	Prehistoric Component on One of the Two Historic Farmsteads	Not Listed		None Identified
Kansas State Historical Society	Casey Demray	(913) 272-8831		14RY411	1987	Martin Stein, US Army Corps of Engineers, Kansas City/Visiting	1 cu. ft.	Lithics	Historic Military	Not Listed		None Identified
Kansas State Historical Society	Casey Demray	(913) 272-8881	Fort Riley Archaeological Inventory	14GE528-14GE530, 14GE533, 14GE534	1976	Don Rowlison	2 cu. ft.	Trash	Historic Military Dumpsite	Not Listed		None Identified
Kansas State University, Manhattan	Dr. Patricia O'Brien	(913) 532-6805	Hospital Latrine Project	14HBS27	1979	Kansas State University, Manhattan	178 artifacts	Undiagnostic Lithics	Prehistoric	Not Listed		None Identified
Kansas State University, Manhattan	Dr. Patricia O'Brien	(913) 532-6805	Project/Survey Names	14RY411	1986	Kansas University Museum of Anthropology, Stanislavski	<1 cu. ft.	Shards & Lithics	Prehistoric	Not Listed		None Identified
Kansas State University, Manhattan	Dr. Patricia O'Brien	(913) 532-6805	Project/Survey Names	14RY699	1970s	Don Rowlison	<1 cu. ft.	Shards	Prehistoric	Not Listed		None Identified
U.S. Army CERL (Temporarily)	John Denty	(913) 239-8618		14RY45, 14RY146, 14RY147	1992	David W. Barson, Public Service Archaeology Program, University of Illinois	2 cu. ft. (<50 Artifacts)	Ceramics & Glass	19th-20th Century Farmstead	Not Listed		None Identified
U.S. Cavalry Museum, Fort Riley (from Fort Riley Ordnance Planning & Division)	William McKeie	(913) 239-6836	Hospital Latrine Project	14HBS27	1979	Kansas State University, Manhattan	1 cu. ft.	Glass, Ceramics, Metal, & Human Euromerician Fetus	Historic Military	Not Listed		None Identified
U.S. Army CERL, II (Temporarily)	Lynn Richardson	(217) 373-4420	Project TAN-94-3 & Project Stream Crossing Survey, Fort Riley	14RY3183, 14RY5102	1994 & 1995	USA CERL Staff	>6 cu. ft.	Lithics	Prehistoric Habitation Site—Middle Ceramic	Not Listed		None Identified
Unmarked Burial Preservation Board, Kansas State Historical Society	John Reynolds	(913) 272-8881		14GE547	Aug. 10, 1990	Mr. Ellbick, Fort Riley	1 cu. ft. Material	Human Calvarium, Highly Mineralized Bison Bone	Prehistoric	Not Listed		Human Calvarium
Wichita State University	Dr. Art Rohn	(316) 689-3195	Site #	14RY51, 14RY52, 14RY314, & 14RY411	1985 & 1986	A H Services	1 cu. ft. (8 boxes)	Lithics, Ceramics, Daub, Glass, Metal, Plastic	Prehistoric Middle Ceramic, Smoky Hill Habitation, Historic	Not Listed		None Identified

APPENDIX III

LIST OF ARCHAEOLOGICAL REFERENCES FOR FORT RILEY, KANSAS, AS OF JANUARY 1996

Subject property: Fort Riley, KS	First name: Camille	Middle Initial: M.
Last name: Avery		
Secondary Authors:		
Title: Memorandum for File, Subject: Re-Testing of Site 14RY411.		
Series:		
Date: Apr. 27, 1987	Length: 3	Contract Number:
Sponsoring Agency:		
Contractor: US Army Corps of Engineers-Kansas City District		
Subcontractor:		
Subject property: Fort Riley, KS	First name: Thomas	Middle Initial: P.
Last name: Barr		
Secondary Authors: Don D. Rowlinson		
Title: An Archaeological Inventory of the Fort Riley Military Reservation.		
Series:		
Date: Jan. 26, 1977	Length: 277	Contract Number: DACA41-76-C-0019
Sponsoring Agency:		
Contractor: Kansas State Historical Society		
Subcontractor:		
Subject property: Fort Riley, KS	First name: Thomas	Middle Initial: P.
Last name: Barr		
Secondary Authors: Don D. Rowlinson		
Title: Fort Riley Archeological Survey: TM 5-801-1 Survey Forms for Historic Structure Sites and Historic Structure Areas.		
Series:		
Date: 1977	Length: 100	Contract Number:
Sponsoring Agency:		
Contractor: Kansas State Historical Society, Archeology Department		
Subcontractor:		
Subject property: Fort Riley, KS	First name: James	Middle Initial: E.
Last name: Bowman		
Secondary Authors:		
Title: Cultural Resources Survey of Twelve Hardened Tank Crossings at Fort Riley, Kansas		
Series:		
Date: Nov. 10, 1992	Length: 26	Contract Number:
Sponsoring Agency:		
Contractor: Tri-Services Cultural Resources Research Center (USACE), Construction Engineering Laboratory		
Subcontractor:		

Subject property: Fort Riley, KS	First name: James	Middle Initial: E.
Last name: Bowman		
Secondary Authors:		
Title: Cultural Resources Survey of the Proposed Squad Assault Course at Fort Riley, Kansas		
Series:		
Date: Dec. 21, 1992	Length: 30	Contract Number:
Sponsoring Agency:		
Contractor: Tri-Services Cultural Resources Research Center (USACE), Construction Engineering Laboratory		
Subcontractor:		
Subject property: Fort Riley, KS	First name: Kevin	Middle Initial: B.
Last name: Cooprider		
Secondary Authors:		
Title: An Archeological Inventory of the Training Areas, Fort Riley Military Reservation (2 Parts).		
Series:		
Date: Sept. 1979	Length: 824	Contract Number: DACA41-76-C-0019
Sponsoring Agency: US Army Corps of Engineers-Kansas City District		
Contractor: Kansas State Historical Society		
Subcontractor:		
Subject property: Fort Riley, KS	First name: John	Middle Initial: H.
Last name: Dendy		
Secondary Authors:		
Title: Cultural Resources Reconnaissance Survey of the Proposed Upgrade of the 34.5 Kv Distribution Line for Irwin Army Hospital, Fort Riley, Kansas.		
Series:		
Date: Mar. 30, 1994	Length: 8	Contract Number:
Sponsoring Agency:		
Contractor:		
Subcontractor:		
Subject property: Fort Riley, KS	First name: Jacqueline	Middle Initial: M.
Last name: McDowell		
Secondary Authors: Kevin P. McGowan		
Title: Phase I Archaeological Survey at Fort Riley, Geary and Riley Counties, Kansas.		
Series: Research Report No. 6		
Date: Jan. 28, 1993	Length: 108	Contract Number: DACA88-92-D-0005
Sponsoring Agency: US Army Construction Engineering Research Laboratory, Champaign, IL		
Contractor: University of Illinois at Urbana-Champaign, Department of Anthropology, Public Service Archaeology Program		
Subcontractor:		
Subject property: Fort Riley (Leased Training Area at Lake Milford), KS		
Last name: Molyneaux	First name: Brian	Middle Initial: L.
Secondary Authors: Nancy J. Hodgson, William H. Ranney, Andrew M Stewart, & Ronald L. Maroin		
Title: A 1993 Cultural Resources Inventory at Milford Lake in Geary, Clay, Dickinson and Riley Counties, Kansas		
Series:		
Date: Mar. 21, 1995	Length: 251	Contract Number: DACW93-C-0042
Sponsoring Agency: US Army Corps of Engineers-Kansas City District		
Contractor: University of South Dakota, Archaeology Laboratory (USDAL)		
Subcontractor:		

Subject property: Fort Riley, KS
Last name: Northcutt First name: John Middle Initial:
Secondary Authors: A. Johnson
Title: Letter With Information by A. Johnson Titled "Reconnaissance of 200 Acres Adjacent to Ft. Riley, KS" from John Northcutt, (Bureau of Land Management), Oklahoma City, OK to Martin Stein, Kansas State Historical Society, Center for Historical Research.

Series:
Date: July 28, 1989 Length: 3 Contract Number:
Sponsoring Agency:
Contractor:
Subcontractor:

Subject property: Fort Riley, KS
Last name: O'Brien First name: Patricia Middle Initial:
Secondary Authors: Robinson and Associates (Washington, D.C.)
Title: Fort Riley: An Historic Overview (2 volumes).
Series:
Date: October 1989 Length Contract Number: DACA41-88-M-0145
Sponsoring Agency: US Army Corps of Engineers-Kansas City District
Contractor: Robinson and Associates
Subcontractor:

Subject property: Fort Riley, KS
Last name: O'Brien, PH.D. First name: Patricia Middle Initial: J.
Secondary Authors:
Title: An Archaeological Test of a Water Line Replacement at Fort Riley, Kansas.
Series:
Date: Jun. 1988, Revised 09/26/88 Length: 47 Contract Number:
Sponsoring Agency: Environmental Office of Fort Riley
Contractor: Kansas State University
Subcontractor:

Subject property: Fort Riley, KS
Last name: Rohn First name: Arthur Middle Initial: H.
Secondary Authors: Robert K. Blasing
Title: Archeological Testing of Four Prehistoric Sites at Fort Riley, Kansas
Series:
Date: 1986 Length: 54 Contract Number: DACA41-85-M-0093, P00001
Sponsoring Agency: US Army Corps of Engineers-Kansas City District
Contractor: Donald Blakeslee, Wichita, KS
Subcontractor:

Subject property: Fort Riley, KS
Last name: Stein First name: Martin Middle Initial:
Secondary Authors:
Title: Progress Report-Supplemental Testing at Site 14RY411.
Series:
Date: Apr. 24, 1977 Length: 1 Contract Number:
Sponsoring Agency: US Army Corps of Engineers-Kansas City District
Contractor: Kansas State Historical Society
Subcontractor:

Subject property: Fort Riley, KS

Last name: West

First name: Dixie

Middle Initial:

Secondary Authors:

Title: Analysis of Faunal Remains Recovered from the Hospital Latrine at Fort Riley, Kansas.

Series:

Date: 1982

Length

Contract Number:

Sponsoring Agency: Thesis for Kansas State University, Anthropology Department.

Contractor:

Subcontractor: